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14. ABSTRACT The goal of this project was to better understand the psychosocial and cultural factors affecting prostate cancer screening among African American (AA) and White men. It was a community-based participatory research project, which involved participation of local community members through a community steering committee. The first phase of the project was a focus group study, and then the focus group results were used to develop a questionnaire instrument. We conducted the Nashville Men's Preventive Health Survey, drawing a stratified and clustered random sample of 392 men ages 40 to 70. White men were more likely than AA men in recommended age ranges to have ever had a DRE or PSA, and to report having a PSA in the past 12 months, but there was no racial difference in DRE screening in the past year. Informed decision-making (IDM) was lower than actual screening rates, with only 2 out of 5 men who engaged in IDM by talking with their doctors about PC and screening options, with no difference by race. The number of visits to the doctor was positively associated with IDM, in particular for AA men. Having a medical home was positively associated with PC screening, but the effect was stronger for White men. For AA men, age, previous visit with a urologist, and doctor recommendation were positively associated with PC screening.					
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The views, opinions and/or findings contained in this report are those of the Principal Investigator and author, Pamela C. Hull, Ph.D., and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.

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INTRODUCTION

Specific Aims of Study

The purpose of this study conducted by Tennessee State University was to identify psychological, social, and cultural barriers to prostate cancer screening. Specifically, the study explored the psychological, social, and cultural beliefs held by white and African American men that act to prevent and/or facilitate them to receive prostate cancer screening. The multi-method study used a Community-Based Participatory Research (CBPR) approach and combined qualitative and quantitative research methodologies. The specific aims were to:

1. Conduct focus groups to explore the psychosocial and cultural beliefs held by AA and white men that act as barriers and/or facilitators to prostate cancer screening
2. Develop a questionnaire instrument that expands on the Health Belief Model to encompass these psychosocial and cultural factors
3. Survey a random sample of white and AA men in Nashville to administer this instrument
4. Compare AA and white men's responses to the instrument items/scales in order to identify which factors are culturally-derived
5. Make recommendations for culturally-relevant prostate cancer screening interventions for AA men and for men in general

This project was executed in five phases. The first phase of the project was a focus group study with AA and white men ages 40-70. The second phase was the development of questionnaire items based on the results and findings of the focus groups. The third phase was the implementation of the Nashville Men's Preventive Health Survey drawing a stratified and clustered random sample of 392 men ages 40 to 70 in Nashville/Davidson County, Tennessee. The fourth phase involved the analysis of the survey data. The fifth phase was the development of recommendations for interventions to increase informed decision-making about prostate cancer screening among African American and White men based on the focus group and survey findings.

Background and Significance

Prostate cancer is the most common type of cancer found among men in the U.S.A., besides skin cancer, and is the second leading cause of cancer death in men, after lung cancer (Jemal, Seigel, et al, 2008). In Tennessee, the death rate for all races from prostate cancer is 34.3 per 100,000, which is above the national rate of 31.5 and well above the Healthy People 2010 Objective of 28.8 (National Cancer Institute, 2005b). While prostate cancer is a health concern for all men, African American men (AA men) are more likely to get prostate cancer than white men, and they are more likely to die from prostate cancer and at younger ages. The United States average prostate cancer prevalence rates for 1992–2002 were over 1.6 times higher for AA men than for white men. Similarly, during the same period (1992–2002) there was a 2.4 times higher prostate cancer death rate for AA men as compared to white men (73.7 and 31.2 per 100,000, respectively).

Yet, AA men are also slightly less likely to get screened for prostate cancer using a PSA blood test than white men (Cokkinides, Bandi, et al, 2008). AA men are more likely to first seek treatment at a later stage of prostate cancer, even after adjusting for comorbidity and socioeconomic status (Mettlin et al., 1997; Polednak, 1997; Oakley-Girvan et al., 2003), and they are also less likely to receive radical surgical or radiation treatments (Harlan et al., 1995; Klabunde et al., 1998; Underwood, et al., 2004a, 2005).

Currently there is no consensus among the medical community and national organizations concerning the value of prostate cancer screening and population-based recommendations for widespread screening. The primary tests used in screening are both imprecise. The results from the PSA blood test can be influenced by other prostate problems besides cancer and has only an approximately 30% predictability of prostate cancer and the DRE is estimated to have an 18 to 28% positive predictive value (Wilbur, 2008). Furthermore, there is still uncertainty over the risks and benefits of screening and treatment options for prostate cancer once it is diagnosed (Collins & Barry, 1996; Ferrini & Woolf, 1998;

Harris & Lohr, 2002). In some studies, early detection of prostate cancer has been linked with greater chances of survival, especially for fast-growing types of prostate cancer (Rosen, 1995; Woods, Montgomery, & Herring, 2004). Results from two recent prospective studies add to the continuing debate. The European Randomized study of screening for prostate cancer reported that prostate cancer screening led to a 20% decrease in the mortality rate for prostate cancer even though there was increased risk for over-diagnosis (Schröder, et al, 2009). On the other hand, while results from the US Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial concurred that screening led to increased diagnoses of prostate cancer, it found that in a 7 to 10 year follow-up of research participants there was no significant difference in prostate cancer death between the experimental and control groups (Andriole, et al, 2009). The American Cancer society continues to promote informed and shared decision making about prostate cancer screening with men and their physicians (ACS, 2009).

The American Cancer Society and the American Urological Association both recommend that an annual PSA blood test and digital rectal exam (DRE) be offered to men ages 50-70 (men with a life expectancy of at least 10 years), and starting younger for those considered at high risk (age 40 or 45 for men with family history or AA men), in addition to the physician discussing the benefits and limitations of screening so that men can make individualized, informed decisions (American Cancer Society, 2005b; American Urological Association, 2000). The Centers for Disease Control and Prevention and the U.S. Preventive Services Task Force do not recommend widespread screening for men, but instead they only recommend “informed decision-making” for men in the same age ranges mentioned above; i.e., for men to discuss screening options and the risks and benefits of screening with their physician annually or on a regular basis. Many researchers are developing and testing new screening methods to detect possible prostate cancer, which may potentially be more accurate than currently available methods, as well as new treatment modalities that may prove to be more effective in increasing survival with prostate cancer than current treatments, particularly among men with aggressive forms of prostate cancer.

Despite the current context of uncertainty surrounding prostate cancer screening and treatment, it is important to enhance our understanding of the factors that influence men’s decisions about whether to engage in informed decision-making and/or to obtain prostate cancer screening. This will contribute to current efforts focused on promoting informed decision-making, as well as future efforts when improved screening and treatment options become available. It may also provide insight into how to reduce racial disparities in prostate cancer. Lack of health insurance, lower levels of educational achievement, and financial limitations prevent some men from getting screened for prostate cancer (Husaini, et al, 2008). Beyond these socioeconomic factors, there also appear to be other barriers that are not as well understood. These could include various psychological, social and cultural factors. If these factors were better understood, more effective programs could be designed to motivate men to talk to their doctors about screening options and to obtain screening. For example, if men do not believe that early detection of the disease will make a difference in outcome for prostate cancer, then a fatalistic attitude can develop and discourage screening behavior. Belief in one’s ability to obtain screening and support from family and friends have been found to be positive influences on screening and treatment behaviors for many health conditions. In general, cultural sensitivities related to personal or historical experiences with the medical community play a role in African American men’s attitude toward preventive health screenings. It is important to determine what barriers are most salient to African American men and the differences in perceived barriers compared with their white counterparts.

By identifying these barriers, interventions can be designed to increase prostate cancer screening among African American men and reduce racial disparities in prostate cancer outcomes. Specifically, the proposed project examines barriers to prostate cancer screening among AA men and white men, with the goal of producing recommendations for interventions to increase prostate cancer screening among African American men. This study was designed to use a community based participatory research (CBPR) approach, with direct participation and input from community members during each phase of the study through the Community Steering Committee (CSC). The CSC contributed valuable input into framing research questions that are relevant to men’s experiences and collecting data that will enable us to examine these questions.

BODY

PHASE 1: Barriers to Prostate Cancer Screening – Focus Group Study

Formation of the Community Steering Committee (CSC)

During the first three months, contacts were made in the community to invite interested persons, community-based organizations, and local prostate cancer researchers to form a Community Steering Committee (CSC) for this study. Dr. Baqar Husaini (Mentor) provided guidance on effective strategies for encouraging community interest and participation in the study and the facilitation of many community contacts. In addition, the Chair of the CSC (Dr. Calvin Atchison) facilitated the attraction of several African American men to join the CSC, given his established rapport in the local African American community and general Nashville community. Dr. Atchison, who is a retired former TSU faculty and director of research, has been working actively on the study in a consultant capacity as part of the research team. Dr. Atchison also worked on Dr. Husaini's previous prostate cancer educational intervention study.

The CSC was comprised of Dr. Atchison (Chair), Dr. Hull (Principal Investigator), Michelle Reece (Research Associate); two local prostate cancer researchers (from Vanderbilt University and Meharry Medical College); prostate cancer survivors; church and community leaders; and other interested community members. The CSC included both African American and white men and women, who were all volunteers.

Collaboration with CSC & the Development of Focus Group Protocols

Community capacity-building and reciprocal learning between researchers and community members are major principles of CBPR. During the first few months, materials were developed for the CSC to provide them with capacity-building resources at the CSC meetings. These materials included Principles of Partnership, a lay summary of the study's objectives, background information on prostate cancer; guidelines on the purpose, development and conducting of focus groups; the first draft of the Focus Group Discussion Guide; the first draft of the pre-questionnaire (demographic items); and the first draft of the focus group recruitment flyer. The research team also gathered several possible educational brochures about prostate cancer screening that would be considered for use during the focus group sessions.

In the first few months, Dustin Brown was the Research Associate working on this study. However, in the summer of 2006 he left TSU to pursue his doctoral studies in Texas. Then another Research Associate with extensive experience conducting community-based research in the local African American community, Michelle Reece, was assigned to work on this study. Both Dustin and Michelle assisted with the formation of the CSC, the development of the CSC capacity-building materials, sent out CSC invitations, and made arrangements for the first CSC meeting. Dr. Husaini and Dr. Atchison provided valuable feedback during this process.

The first CSC meeting was held in July 2006 at the Cohn Adult Learning Center (part of Metro Nashville Public Schools), which is a convenient location for the community members, on a weekday evening to accommodate their work schedules. A light meal was served since the meeting was held during dinnertime, and as a token of appreciation for the CSC members volunteering their time. They were also given a TSU Center for Health Research coffee mug as a gift. Sixteen people were in attendance at the meeting. There were several other persons who had agreed to serve on the CSC but were unable to attend the first meeting due to schedule conflicts.

The CSC was provided a notebook of the study-related materials mentioned above. Dr. Hull and Dr. Atchison provided an overview of the study's objectives, principles of CBPR, the study timeline, and general guidelines for developing focus groups. The CSC agreed upon its Principles of Partnership. Next the group reviewed the first draft of the focus group discussion guide, which was developed based on the Health Belief Model and existing research, and was presented to the CSC as a starting point for discussion to be modified together in the group. This led to a lively discussion about men's beliefs and

attitudes about prostate cancer and screening. Through this discussion, the CSC made very valuable suggestions for changes and additions to the discussion guide in order to be more acceptable to the male participants, and to capture potentially important issues.

The CSC reviewed the educational brochures and selected one that had colorful illustrations and simple language, for use in the focus group discussions. The CSC also recommended modifications to the pre-questionnaire and the recruitment flier, and they assisted in the development of recruitment strategies and an implementation plan for the focus groups, which are described below. After the CSC meeting, the recommended revisions were made to the study protocol, the discussion guide and the recruitment flier. These materials were then submitted along with the study protocol to the local TSU IRB and DOD's human subjects review board for approval.

Focus Group Site Selection

With input from the CSC, seven different types of locations were identified as target sites to hold the focus groups. These were churches, community centers, libraries, an adult learning center, a men's group, a local rescue mission (community-based agency), and TSU campus. The PI and the CSC chose these locations since they represent a variety of community places where men would feel comfortable going and to which they would have easy access. In addition, the local men's rescue mission was selected in order to reach disadvantaged and underserved men (those in a substance abuse recovery program).

Based on these categories of sites, specific locations were identified in different parts of Davidson County, to enable access to men living or working in various parts of town. Reservations and arrangements were made to schedule 12 focus group sessions to be held at these locations during the months of October, November and December. Two sessions were cancelled because no eligible participants signed up for them. Thus, a total of 10 sessions were conducted. The sites, part of the county, and attendance for each are listed in **Table 1**.

Training of Focus Group Facilitators

Dr. Calvin Atchison and Dr. Cliff Cockerham conducted the focus groups, since the CSC determined that male participants would feel more comfortable talking about prostate cancer with a male facilitator. The PI held an orientation meeting with the facilitators to review the purpose of the study, procedures for conducting the focus groups, the discussion guide, and recommendations for facilitating productive focus group discussions. Dr. Atchison and Dr. Cockerham were familiar with research methods and procedures for conducting focus groups and have a lot of experience in facilitating group discussions. This was confirmed upon listening to the focus group recordings, which indicated that the facilitators conducted the focus groups in a correct and effective manner.

Both facilitators completed NIH's online human subjects protection training course. During their orientation with the PI, they were also trained in the focus group protocol and human subjects protection protocol (including informed consent process and protection of confidentiality). The facilitators were instructed to ask the focus group participants to respect the other participants' privacy and confidentiality by not talking about their comments with other people outside of the focus group.

The facilitators were trained on the use of the focus group discussion guide. The guide consisted of a list of cues that included the six elements of the Health Belief Model (HBM), in addition to other topics suggested by the CSC that were used to stimulate discussion of other psychosocial and cultural factors that may influence prostate screening behaviors among the African American and White men. This guide served as an outline of main questions, with some cues that were used to probe participants to expand further on certain issues when necessary. The facilitators were instructed to use the discussion guide as a tool to stimulate discussion, and that it was meant to be flexible to flow with the natural course of discussion, so they did not need to follow the exact order of questions or necessarily cover all of the questions if time ran out.

Recruitment of Focus Group Participants

The original plan was to recruit men to participate in focus groups divided by race, with half African American groups and half White groups. However, the CSC recommended that it would be better to have some combined groups and some race-specific groups in order to see whether the race composition of the group affects the comments that men make. Interestingly, most of the men in the CSC thought that it would not make a difference, that men would discuss the same things in either group context. In addition, we felt that it would help the recruitment process to have some of the groups be combined. Therefore, we decided to schedule 4 groups for White men, 4 groups for African American men, and 4 combined groups open to both groups of men. This revised strategy was detailed in the study protocol approved by the local and DOD human subjects protection review boards. Thus we planned for the sessions with African American men to be facilitated by Dr. Atchison, and for the sessions with white men to be facilitated by Dr. Cockerham, in order to match the race and gender of the facilitator and participants in these sessions. Dr. Atchison facilitated the combined-race groups.

The PI had originally planned to use a random household sample to select potential focus group participants, as listed in the SOW. However, during the grant application development, upon further review of expert recommendations for conducting focus groups, the design was changed to collect a convenience sample of men through a variety of recruitment strategies. This convenience sample design is what was described in the narrative section of the grant application that was submitted to and funded by DOD, but the original random sample design was erroneously left in the SOW section of the application. It should have stated that a convenience sample would be collected, to match the narrative section of the funded grant application.

The recruitment plan for the convenience sample was finalized with the input from the CSC. The recruitment flier described the purpose of the focus groups, eligibility criteria, and incentives (\$25 grocery store gift card and refreshments, plus a drawing for a \$50 gift card at the end of the study), and indicated for interested men to call TSU for more information and to sign up for a group at a time and location that is most convenient.

In order to reach a socio-economically and geographically diverse male sample, a number of methods were used to recruit men from around the Nashville/Davidson County community. Recruitment fliers were distributed in public venues across town, particularly near the focus group sites, including health clinics, community centers, barbershops, grocery stores, bowling alleys, golf clubs, libraries, gas stations and other local businesses in the areas where the focus groups were being held. Additionally, recruitment announcements were made via newspaper advertisement, public radio public service announcements, a public radio talk show, church bulletins and ministerial group announcements, and email list-servers. The church group, the men's group and the rescue mission assisted in making announcements for us to recruit men directly from their constituents for the sessions held at their sites. For the sites at the other locations, interested men called the TSU Center for Health Research to find out available focus group session dates and locations and sign up for the one most convenient for them. Participants who registered were contacted by phone prior to the focus group meeting to remind them of the meeting time and place.

Informed Consent of Focus Group Participants

At the start of each focus group session, the group facilitator provided an overview of the study and carefully reviewed the informed consent document with the participants. Participants were given the opportunity to ask questions and information was clarified. Then men were asked to sign the informed consent form if they were sure that they wanted to participate in the study; if not, they were free to decide not to participate. All signed informed consent forms were collected before focus group discussion was started.

Table 1. Focus Group Enrollment by Site (Total N=74)

Focus Group Site	Location in Davidson County	N	% of Total Sample
Church	Southeast	14	18.9%
Community Center	Northwest	7	9.5%
Library	Southeast	1	2.8%
Adult Learning Center (2 sessions)	West	2	1.4%
Men's Group	East	10	13.5%
Men's Mission Center (2 sessions)	Downtown	29	39.2%
University (2 sessions)	Northwest	11	14.9%

Table 2. Demographic Characteristics of Men Enrolled in Focus Group Study

Variable	N	%
Total N	74	
Age Groups (Mean = 49.5)		
40-49 years	40	54.1%
50-59 years	28	37.8%
60-64 years	2	2.7%
65 years & older	4	5.4%
Race		
African American	56	75.7%
White	18	24.3%
Marital Status		
Single	19	25.7%
Married	23	31.1%
Separated	3	4.1%
Divorced	28	37.8%
Widowed	1	1.4%
Education		
Less than high school	12	16.2%
High School	37	50.0%
Associate's Degree	13	17.6%
Bachelor's Degree	5	6.8%
Graduate/Professional Degree	7	9.4%

Focus Group Sessions

Ten focus group sessions were implemented from 10/14/06 through 12/14/06. A total of 74 men enrolled in the study and participated in the focus groups (see **Table 1**). Three focus group sessions were held with African American men only, 3 sessions with White men only, and 4 sessions with both African American and White men. After the informed consent forms were collected, the focus group session lasted approximately 1½ hours (90 minutes). The group discussions were recorded on a digital recorder, and facilitator/student assistant notes were kept from each session.

To start the session (after the informed consent forms were collected), the facilitator distributed a brief pre-questionnaire that included demographic questions on age, race, education and marital status, which was completed by each participant. The purpose of the pre-questionnaire was to be able to provide a demographic profile of the men who participated in the focus groups. These pre-questionnaires were anonymous (no names or ID numbers were assigned) and were not part of the discussion. The demographic characteristics of the focus group sample are summarized below in **Table 2**.

Next the facilitator passed out the educational brochure and began the discussion. At the end of the time period, the facilitator thanked the participants for their time and input, and then distributed the grocery store gift cards. He also distributed a list of local community health clinics that provide prostate cancer screening at an affordable price for men without health insurance.

Analysis of Focus Group Data

The recordings from the focus group sessions were transcribed with names and all other identifying information excluded from the transcripts. Following this the CSC met to review extracts from the transcripts and to identify recurrent themes for discussion and for the development of the questionnaire items for the survey. Complete transcriptions of the 10 focus group sessions were imported into the NVivo7 qualitative analysis software program. Next, key themes and concepts were coded, including relevant psychosocial factors affecting general health care seeking behavior and specifically prostate cancer screening decisions, as well as a focus on the language used by men to discuss these issues. The information was organized into groups of major themes and subthemes. This initial assessment of emerging themes from the focus group discussions was presented to the CSC for discussion, interpretation, and feedback. Dr. Husaini and Dr. Atchison also provided valuable guidance and feedback.

RESULTS OF FOCUS GROUP STUDY

Several themes emerged from the focus group discussions. These included; (1) reasons why men choose to go or not go to the doctor; (2) knowledge about prostate cancer; (3) attitudes towards the methods used for prostate cancer screening; (4) interaction with physician; (5) personal decision making process; (6) reasons to get screened or not to get screened for prostate cancer.

Going to the Doctor

One of the major themes brought up in the focus group was men's (lack of) willingness to go to the doctor for any reason (for illness or prevention). Reasons for going to the doctor were identified as key issues and as prerequisite steps to considering screening options.

- Reasons to go to the doctor:
 - When symptoms of a problem do not go away or become unbearable (pain is not necessarily a factor)
 - When you have trouble getting or keeping an erection, or trouble urinating
 - To follow up on previous or ongoing health condition
- Reasons NOT to go to the doctor:
 - Generally feeling well or not having severe symptoms
 - Do not want to find out that you have other health problems (besides the reason for the visit)
 - A few mentioned distrust for doctors and medical tests in general

- Masculinity and gender socialization shaped men's attitudes about and decisions to seek medical care in general.

Prostate Cancer Knowledge

Several participants revealed that they had a lack of knowledge or inaccurate knowledge regarding prostate cancer.

- Location and purpose of prostate – Only present in men
- Prevalence of prostate cancer and what risk factors are
- What screening methods are and what results mean
- Confusion with other medical tests (e.g., colonoscopy)

Many participants also noted a lack of attention to prostate cancer and other men's health issues (other than erectile dysfunction) in the media. Participants wanted to see and hear more information about how to prevent prostate cancer, risk factors for prostate cancer, and recommendations for screening, among other things on television and through other media.

Attitudes about Prostate Cancer Screening Methods

Many participants expressed acceptance or a neutral attitude about the PSA (Prostate Specific Antigen) blood test. A few mentioned fear of needles and doubt about the accuracy of the PSA test. However, very strong emotions were expressed regarding the digital rectal exam (DRE). Concerns were expressed about pain or discomfort (position of exam a potential factor). Other issues related to masculinity and sexuality, including concerns about: embarrassment ("pride") and violation of privacy; violation of manhood, feeling like "less of a man"; homophobia or associating rectal exam with stigma of homosexuality (anal sex), fear of stimulating latent homosexual tendencies.

Interaction with Physician

The quality and content of interaction with the doctor also influenced men's screening decisions. Many men wanted a doctor to take time to explain the screening options and to help them make an informed decision. Some preferred a doctor they knew well; others preferred a more impersonal interaction for getting the DRE. Some preferred a male doctor (because they were embarrassed in front of woman), while others preferred female doctor because they viewed them as being more gentle. The doctor's recommendation was very influential for most men in considering or deciding to obtain prostate cancer screening.

Decision-Making Process

Men discussed multiple factors that they weigh as reasons in favor of or against deciding to get screened for prostate cancer. Many men had never been screened, but had considered it or wanted more information to be able to make an informed decision. The reasons mentioned are summarized below.

- Reasons to get screened
 - Want to know if have prostate cancer
 - Do not want to die from prostate cancer
 - Believe will live longer with early detection
 - Part of taking care of health
 - In line with spiritual beliefs
 - Because getting older (or African American)
 - Want to avoid problems prostate cancer could cause with sex life and urination
 - Encouragement from family and pastor/church members
 - Family member had cancer
 - Doctor recommendation
- Reasons NOT to get screened:
 - Do not want to know if have prostate cancer
 - Afraid of dying from prostate cancer
 - Feel early detection makes no difference

- Do not think you will get prostate cancer
- Trust in God to take care of me
- Family/friends discouraged me
- Most men do not get screened
- Did not know about prostate cancer screening
- Doctor did not recommend
- Do not want to find out have additional health problems to deal with
- Lack of health insurance
- Other financial concerns

Problems Encountered

The major problem encountered was the difficulty of recruiting White men to participate in the study. Several efforts were made to promote the focus groups among white men, such as distributing fliers in stores, restaurants, and libraries in area of the city with predominantly White residents, as well as sending announcements to predominantly White churches and posting an ad in the classified section of the local newspaper. Despite these recruitment efforts, relatively few White men expressed interest in participating in the study. Three focus groups were scheduled exclusively for White men, and a couple of White men signed up ahead of time for these sessions, but only two of the White men actually showed up for the session (one showed up for two sessions, and no one came to the third session). The combined groups were open to both White men and African American men, but only 16 White men signed up for and attended these sessions.

At the same time, we had a very strong response from African American men who showed interest to sign up for and attend the sessions. After offering 12 sessions (2 of which were cancelled due to lack of participants) and completing 10 sessions (more than the originally proposed 8 sessions), we had enrolled 74 men. Our target was to enroll up to 80 men, but it was not feasible to conduct any more focus group sessions due to time and budget limitations. We were near the time of December holidays, when it is difficult to recruit people because they are too busy, and postponing additional sessions until January 2007 would have put us behind on our timeline. In addition, to hold additional sessions we would have had to incur more expenses over our budget (i.e., paying the facilitator and buying refreshments).

Furthermore, we felt that the data collected in the completed focus groups sufficiently covered the topic areas that we were interested in covering. Most focus group experts recommend stopping conducting additional sessions when no new information emerges from the discussions, which is referred to as “reaching saturation.” After the 10th session, the facilitator and the PI felt that all of the topics had been covered thoroughly and that the participants in the last two sessions were bringing up no new information. Therefore, it was not necessary to conduct any more groups because we already had the information that we needed to advance to the next phase of the study.

Finally, our primary focus is on African American men, since this is the population that experiences disparities in prostate cancer and we understand less about barriers to screening in this population. Thus, the relatively fewer number of White men participants is not a concern for the study; if the composition had been reversed (few African American men), that would have been a concern.

PHASE 2: Development of Survey Items based on Focus Group Findings

Development of Questionnaire Instrument

A summary of focus group results, by theme, along with consensus of statements and text units of focus group participants were used to determine appropriate areas of questions for the survey questionnaire. These were presented to the CSC for discussion, interpretation and feedback, as the first step in developing items for the survey questionnaire. The CSC input and the content of the focus group discussions helped to guide the topic areas for questionnaire items to be developed by the research team.

The focus group findings and CSC input were used to draft sets of possible questionnaire items. The draft questionnaire went through a long process of revisions within the research team based on input from Dr. Husaini, Dr. Atchison, and consultants who are experts on cancer screening (Dr. Robert Levine from Meharry Medical College) and survey design and questionnaire development (Dr. Tony Brown from Vanderbilt University – Sociology, and Mr. Marie Hammond from TSU – Psychology).

In addition, the draft questionnaires were presented to the CSC at three separate meetings. Numerous suggestions were made for additions, deletions, and modifications, particularly in terms of wording changes to make the questions more understandable to the average person. This was also done to ensure that any important question or information was not omitted, and to keep the questionnaire as short and easy flowing as possible. During this process, drafts of the questionnaire were also pre-tested on office staff, students, and men in the local community in order to work out issues with question wording and flow of questions.

In addition to the new questions that were developed based on the focus groups, numerous existing, previously validated instruments were reviewed to consider including them to measure possible covariate variables. Several instruments were chosen to include in the questionnaire, such as self-efficacy, depressive symptoms, health literacy, religiosity, discrimination, etc.

To accompany the questionnaire, flash cards for the interviewer and a respondent booklet with sets of answer choices, were developed to ease the interview process. We also developed the recruitment flyer and the informed consent form, both of which were modified based on input from the CSC on optimal wording and presentation. We created field-tracking forms to document contacts with selected households along with an interviewer protocol for the questionnaire. The field-tracking database and the questionnaire database were set up for secure data entry to protect participant information and questionnaire data. See Questionnaire in **Appendix**.

Finally, during the process of reviewing focus group findings and developing the questionnaire, we formulated a series a research questions for the survey portion of the study. These are listed on the next page, and are addressed in the results section.

Research Questions for Survey

1. Are there racial differences in (a) prostate cancer screening rates, (b) informed decision-making about prostate cancer screening, (c) prostate cancer knowledge, or (d) general health care seeking behaviors?
2. Are there racial differences in (a) the reasons for choosing to get screened, (b) reasons for not getting screened, or (c) reasons for considering screening?
3. Are there racial differences in the predictors of informed decision-making or prostate cancer screening? The predictors to be examined include:
 - A. Education
 - a. Education level
 - b. Health literacy
 - B. Prostate cancer knowledge
 - C. Previous prostate health problems
 - D. Health care access:
 - a. Health insurance
 - b. Having a medical home
 - c. Number of physician visits
 - d. Previous visit to a urologist
 - e. Satisfaction with physician interaction
 - f. Delaying healthcare
 - E. Doctor recommendation to get screened
 - F. Perceptions of screening methods
 - a. Perceived pain from PSA
 - b. Perceived pain from DRE
 - c. Perceptions of DRE as:
 - i. Embarrassing
 - ii. Violating manhood
 - iii. Making one feel like less of a man
 - iv. Potentially stimulating homosexual tendencies
 - G. Self-efficacy
 - H. Social support
 - a. Marital status/partner
 - b. Perceived social support
 - I. Religiosity
 - J. Perceived discrimination in healthcare
4. Are there racial differences in (a) sources of health information, (b) attendance to prostate cancer education programs, and (c) desire for more attention to men's health issues in the news and media?

PHASE 3. Survey Implementation

Sample Selection

A multi-stage stratified and clustered random sample was drawn from the 144 census tracts in Davidson County (see **Table 3**). First Davidson County was divided into 4 strata based on geographic quadrants: (1) northwest, (2) northeast, (3) southeast, and (4) southwest. Within each stratum, 5 census tracts were randomly selected, using probability proportional to size (PPS) selection (total 20 census tracts). The census tract was the Primary Sampling Unit (PSU).

Within each selected census tract, all of the corresponding census blocks were stratified into two substrata: (a) census blocks with a high proportion (33%+) of non-Hispanic black men ages 40-69 and (b) census blocks with a low proportion (<33%) of black men ages 40-69 (based on available 2000 Census data). Within each substratum, 10 census blocks were randomly selected using PPS, yielding a total 80 census blocks). The census block is the cluster.

Table 3. Sampling Design for Survey

STRATA	Primary Sampling Unit: Census tracts (random PPS)	SUBSTRATA (Census Blocks)	Cluster: Census Blocks (random PPS)
Northwest	5	High % Black Men	10
		Low % Black Men	10
Northeast	5	High % Black Men	10
		Low % Black Men	10
Southeast	5	High % Black Men	10
		Low % Black Men	10
Southwest	5	High % Black Men	10
		Low % Black Men	10
Total = 4 strata	Total = 20 tracts	Total = 8 Substrata	Total = 80 blocks

Within each substratum, we randomly selected the order of clusters that to be opened for data collection. Pairs of clusters from the same strata (one from the high substrata and one from the low substrata) were to be opened one pair at a time, until the approximate target sample size was reached in each strata after completing sampling in the opened clusters. Our goal was to achieve approximately 100 respondents in each stratum. Thus, all 20 block clusters in each stratum would likely not be opened for data collection. The number of block clusters opened and the number of respondents interviewed in each stratum would likely be different due to varying sizes of the census blocks.

Within each census block cluster, all of the households were included in the sampling frame (a 100% sample of households). However, in exceptionally large census block that included large apartment complexes, we planned to block list large apartment complexes and a draw a 10% random sample from the apartments. During the survey implementation, this was done in one apartment complex. Sampling weights will be adjusted to account for this differential probability of selection. Within each household, attempts were made to screen all men for eligibility (unless they refused), and all eligible men were invited to participate in the survey (100% sample of eligible men in each household). Sampling weights and analyses will be adjusted to account for the clustered nature of the sampling design.

Data Collection

After the census blocks were selected, addresses were identified using data from the Metropolitan Nashville Planning Department (neighborhood data and Metro Maps). We also cross-referenced Metro Maps with satellite images from Google Maps. Reverse phone directories were used to look up available

phone numbers for the addresses in the selected blocks, to allow for phone calls to be made for follow-up. Interviewers recorded the outcome of each household contact on Household Tracking Forms. The households in the selected blocks were first contacted by in-person door-to-door contact with study flyers. If residents were home at the first visit, interviewers spoke with them at that visit. If they were not home, interviewers placed door hanger flyers on their doors inviting them to participate in the study if eligible, with a phone number to call if interested or if they did not want further contact. Next phone calls were made from the office to the households with listed numbers. Then in-person door-to-door contacts were made again, in particular to the homes that could not be contacted by phone. At least two attempts were made to contact each household in person and/or by phone, but for most households interviewers were able to make at least four attempts to contact a household. If residents expressed that they did not want to talk to us, or if a safety concern was noted (e.g., unable to get to door due to fenced yard with loose dog), no further contacts were made. The Household Tracking Form data and the outcome of each household were recorded into a database (e.g., no eligible men, refused contact, unable to contact, etc.). Interviewers also completed a brief Neighborhood Observation Form for each household during an in-person visit to gather general information about the condition of the blocks.

Table 4 shows the number of census blocks (clusters) that were surveyed, the number of households in each substratum, and the number of interviews completed in each substrata of Davidson County. It also shows the percentage distribution of research participants by substrata and strata. Three strata each contributed between 28% and 30% of the total number of surveys completed. The lowest percentage of surveys completed (approximately 13%) was obtained from the Southwest strata of Davidson County.

Table 4. Number of households and interviews completed in selected Census blocks

Strata	Substrata (High or Low % Black Men)	Clusters: Census Blocks Surveyed	Households per Substrata	Interviews Completed	% of Total Interviews Completed
North West	Low	7	1048	38	9.7%
	High	7	1294	73	18.6%
North East	Low	9	841	36	9.2%
	High	9	882	79	20.2%
South West	Low	7	1022	32	8.2%
	High	7	726	18	4.6%
South East	Low	5	969	71	18.1%
	High	5	1463	45	11.5%
TOTAL		56	8245	392	100%

Survey data were collected during the period of May 2008 through February 2009. Of the 8245 addresses that were listed in the randomly selected blocks, 38.3% (3157 households) were successfully contacted (See **Table 5**). Because of our strict eligibility criteria (White or AA male, ages 40-70, no history of prostate cancer), we expected a high proportion of ineligible households. Out of the contacted households, 57.3% (1810 households) indicated that there were either no men residing in the household or that the men were ineligible to participate in the survey based on the criteria for participation. Just over 22% of the contacted households said they were not interested in talking with us (without allowing for eligibility screening). About 8% (259 men) were eligible but chose not to participate in the study. A total of 392 valid surveys were completed. Among the successfully contacted households that were confirmed to have eligible men (651), the response rate was 60.2% (392 interviews out of 651 eligible).

Table 5. Survey Response Rates

	Number of Households	% of All Households
TOTAL # Households that could not be contacted	5088	61.7%
Vacant, Invalid or Unsafe Residences	657	
Valid Address with no responses	4431	
TOTAL # Households that were successfully contacted	3157	38.3%
Households with no eligible men	1810	
Households refused contact –unable to check eligibility	696	
Eligible men who chose not to participate	259	
Number of participants in study	392	
TOTAL # Households in Selected Blocks	8245	100%

Protection of Human Subjects***Field Interviewer Training***

Field Interviewers were trained in the protection of human subjects, the recruitment protocol for approaching households, field documentation of household contacts, the informed consent process, the questionnaire protocol, and interviewing techniques. The interviewers were trained to follow a script for screening and recruiting participants. Respondents were eligible to participate in the survey if they identified themselves as non-Hispanic African American or white, if they were 40 to 70 years old and never had a diagnosis of prostate cancer.

Informed Consent Process

Adult males were enrolled in the study if they met each of the three eligibility criteria and volunteered to participate. The interviewer reviewed the informed consent document with each potential respondent, which provided them information on the survey, the types of questions asked, risks and benefits, confidentiality of their information and responses, and their ability to withdraw or refuse to participate without penalty. They were also informed that all survey responses were keyed in secure data files and no personal identifying information will be attached to their responses. Interested participants had to sign the informed consent form in order to participate in the study.

Measures: New Items Developed Based on Focus Group Findings***Prostate Cancer Knowledge***

Based on the focus group findings, the recommendations of the CSC, and previous research, a prostate cancer knowledge scale was constructed including 18 true or false items covering the following areas. Additionally, one question was used to test the respondents' ability to correctly identify the two methods commonly used to screen for prostate cancer.

1. Location and function of the prostate gland
2. Risk factors for prostate cancer
3. Prostate cancer incidence and mortality
4. Screening methods for prostate cancer
5. Symptoms of prostate cancer
6. Prostate cancer diagnosis and treatment.

Correct answers to the knowledge questions were scored 1 and 0 for incorrect answers. The sum of the scores provided the total knowledge score with a range of 0 to 19.

Screening Behavior and Intent to Screen

Participants were asked to indicate whether they were previously screened for prostate cancer using the PSA or DRE, and the number of months since their last screen. Based on their responses, each participant was assigned a score of 1 = screened in last 12 months or 0 = not screened in past twelve months, for each screening method, as well as for using either screening method in this time period. They were also asked whether they planned to get screened within the next twelve months using either method of screening (intention to be screened in next twelve months = 1 and no intention = 0).

Informed Decision Making

Participants were asked whether or not they had previously discussed prostate cancer screening with their physician, and what, if any, were the recommendations made by their physician, to indicate the outcome of these discussions. Participants who had never been screened and had never discussed prostate cancer screening with their doctor were also asked if they would like to discuss screening with their doctor.

Predictors/Reasons for Getting Screened or for Not Getting Screened

Based on the focus groups results, we developed lists of possible factors that motivated or discourage men from getting screened. Participants were asked to select from the lists the reasons that caused them to be screened or to not be screened. If the participants were screened, they were asked to identify the reasons why they chose to be screened. If they were not screened, they indicated the reasons why they were not screened and also why they would consider getting screened. In each case, after responding yes or no to each reason, the participants were then asked to rank their top five reasons. The reasons covered the eight domains listed below.

1. Knowledge about screening
2. Access to screening
3. Recommendation by physician
4. Encouragement for screening by persons other than doctor
5. Perception of need for screening
6. Risk and benefits of screening
7. Spiritual or religious beliefs regarding screening
8. Fear and other general concerns about health and screening

Perception of Screening Methods

Respondents were asked about their perceptions of the PSA test and DRE, in addition to the Wong-Baker Faces of Pain Scale (1988; see Table 6). Based on the focus group findings, we created specific questions about the DRE and whether the nature of this exam was embarrassing and a deterrent to screening.

Sources of Health Information

The study participants were asked to identify where they usually get information about health. A list of 11 sources of health information was given and participants were asked to select up to four of these sources. The sources were television, radio, newspapers, magazines, doctor, family members, friends, the Internet, brochures/leaflets, church/religious organization or meetings. Participants also had the option to indicate any other source if it was not listed.

Physician Visits and Access to Medical Care

A common concern that was mentioned in the Barriers to Prostate Cancer Screening focus group study (Hull, et al, 2007) was that men (particularly AA men) tended to delay getting medical care, which resulted in late stage diagnosis of medical problems, consequently leading to increased morbidity and mortality. In this study, the participants were asked to indicate:

1. Whether or not they had access to medical care (insurance, physician);

2. Frequency of physician or hospital visits;
3. Reasons for delaying medical care;
4. Likelihood of receiving medical care for symptoms of prostate problems or prostate cancer; and
5. Self-reported medical conditions

Measures: Existing Instruments

Table 6 reports a list of previously validated psychosocial measures that were included in the Nashville Men's Preventive Health Survey questionnaire.

Table 6. Psychosocial Measures

Name of Measure	Description of Assessment & Scoring
General Self-Efficacy Scale (GSE) (Jerusalem & Schwarzer, 1981)	10-item, four point Likert scale that measures an overall dimension of a person's beliefs about their ability to cope with different, difficult stressors in life. (0 to 40) -- higher summated scores indicate stronger self-efficacy
ENRICH Social Support Instrument (ESSI) (Mitchell, Powell, Blumenthal, Norten, et al., 2003).	7-item, five point Likert scale that assesses a person's estimation of their level of social support Higher summated scores indicate higher level of social support
Perceived Stress Scale-10 Item (PSS) (Cohen, Kamarck, & Mermelstein, 1983).	10-item, five point Likert scale that measures how often a person felt or thought a certain way during the last month Scale is summed with higher scores indicating higher levels of perceived stress.
Satisfaction With Life Scale (SWLS) (Diener, 1984)	5-item, seven point Likert scale intended to measure overall cognitive judgments of one's satisfaction life --- 35 - 31 Extremely satisfied; 26 - 30 Satisfied; 15 - 19 Slightly dissatisfied; 21 - 25 Slightly satisfied; 20 Neutral; 10 - 14 Dissatisfied; 5 - 9 Extremely dissatisfied
Mental Health Inventory (MHI-5) (Berwick, Murphy, Goldman, et al, 1991).	5-item, five point Likert scale self report inventory that assesses level of mental health among psychiatrically healthy samples
Marlowe-Crowne Social Desirability Scale MC-10 (Strahan & Gerbasi, 1972)	10 true or false self report items that assess the extent to which survey respondents indicate or attribute unrealistically favorable traits to themselves. Higher scores typically suggest tendency for more socially desirable responses
Rapid Estimate of Adult Learning in Medicine (REALM)	Instrument used to assess an adult patient's ability to read common medical words 0-18 (3 rd Grade or lower); unable to read most low-literacy materials; will need oral instructions / illustrated material/audio-visual 19 to 44 (4 th -6 th grade); will need low-literacy materials, may not be able to read prescription labels 45-60 (7 th -8 th grade); will struggle with most patient education materials; will not be offended by low-literacy materials 61 to 66 High school; will be able to read most patient education materials
Patient-Physician Interaction (Saha, Arbelaez & Cooper, 2003)	5-item, four point Likert scale that assesses satisfaction with interaction with physician on most recent visit
Perceived Health Discrimination	Single item that assessed whether respondent felt discriminated against because of race over past 2 years
Wong-Baker Faces of Pain	A 6 point visual scale that shows facial expressions to help persons rate their perception of pain or how their pain makes them feel 0 (No hurt) thru 5 (hurts the worst)

Measures: Demographic Information

Demographic information such as age, marital status, education, household income, employment-status, and insurance status were included in the survey. Neighborhood characteristics were obtained through the interviewer ratings of the blocks, as well as census data linked to each census block.

PHASE 4: Analysis of Survey Data

Statistical Analyses

Bivariate and multivariate analyses of the variables of interest were performed. Tests of relationships between each psychosocial and cultural measure with the screening outcome variables consisted of either cross-tabulations with Chi-square tests (for categorical independent variables) or Pearson's correlations (for continuous independent variables).

Multivariate analyses tested the relationships between psychosocial variables with screening outcomes, while controlling for demographic characteristics and other confounding factors. Logistic regression was used for models with dichotomous outcome variables (coded as Yes=1 and No=0).

Characteristics of Sample (N = 392)

Table 7 reports the demographic characteristics of the survey sample. The sample was comprised of 194 AA men and 198 white men ages 40 – 70 years, with an overall mean age of 53.47 years ($SD=8.53$). Over 50% of the total sample was married. Only 61.5% of the sample had more than a high school education. Nearly 60% of the sample reported that they were currently working. The median annual household income was within the range of \$45,000.00 to \$49,999.00. Just over 80% of the sample had medical insurance and nearly 90% of the sample indicated that they had at least one doctor visit within the last year.

There were some significant racial differences in the demographic characteristics of the sample. For instance, 62% of white men were married compared to 45% of AA men, whereas more AA men (27%) reported having never been married than white men (11%). White men were more likely than AA men to have a college degree or higher (39% and 22% respectively). There were more AA men (16%) than white men (8.6%) reporting that they were currently not working or unemployed.

Table 7. Sample Characteristics

Variable	African American n=194	White n=198	Total N=392
Age mean (SD)	52.7 (8.07)	54.21 (8.92)	53.47 (8.53)
40-49 years	38.7%	36.0%	37.4 %
50-64 years	52.9%	45.7%	49.2%
65 years and older	8.4%	18.3%	13.4%
Marital Status*			
Never Married	26.6%	10.6%†	18.5%
Married	45.3%	62.1%†	53.8%
Separated	5.7%	3.5%	4.6%
Divorced	18.8%	20.7%	19.7%
Widowed	3.6%	3.0%	3.3%
Education*			
High School or Less	44.6%	32.5%†	38.5%
Some College	33.2%	28.9%	31.0%
College Graduate or more	22.3%	38.6%†	30.5%
Employment Status*			
Not Working	16.0 %	8.6%†	12.3%
Working	56.0%	60.6%	58.3%
Retired	15.0%	16.7%	15.9%
Disabled	13.0%	14.1%	13.6%
Income			
Less than \$25,000	34.1%	25.4%	29.7%
\$25,000 – \$44,999	17.0%	19.3%	18.2%
\$45,000 - \$64,999	19.9%	15.5%	17.6%
\$65,000 - \$84,999	10.8%	13.8%	12.3%
\$85,000 thru highest	18.2%	26.0%	22.1%
Health Insurance Status			
No Insurance	19.7%	19.9%	19.8%
Medicare A/Medicare B	13.5%	23.0%	18.3%
TennCare/CoverTN	12.4%	2.6%	7.5%
Military/VA	9.3%	5.1%	7.2%
Other/ Private Insurance	45.1%	49.5%	47.3%
Dr. Visit in last Year	91.6%	85.7%	88.6%

* Significant association with race based on Chi-square $p < .05$

† Significant difference by race based on difference of proportion z-test $p < .05$

Survey Results

Research Question #1:

Are there racial differences in (a) prostate cancer screening rates, (b) informed decision-making about prostate cancer screening, (c) prostate cancer knowledge, or (d) general health care seeking behaviors?

(a) Prostate Cancer Screening Rates & Intention to Obtain Prostate Cancer Screening

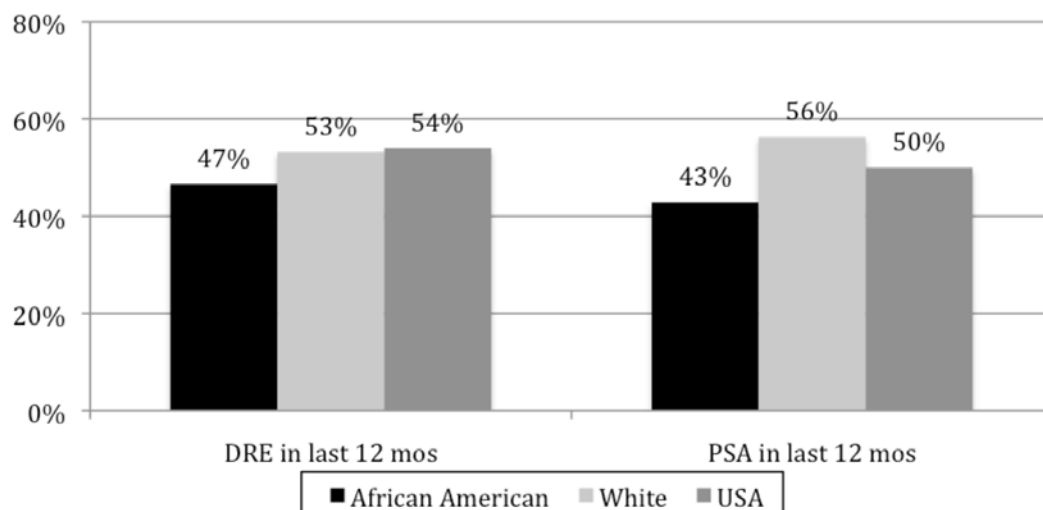
Among men who fell within the recommended ages for prostate cancer screening (AA men 40-70; White men 50-70), White men were more likely to have ever had a DRE or PSA. There was no racial difference in DRE exam screening rates in the past year; however, the percentage for AA men (46.6%) was lower than the national average (54%) whereas the percentage for White men (53.2%) approached the national average. Self-reports for PSA screening in the past 12 months in this sample were significantly higher for white men (56.3%) than for AA men (42.9%), $p < .05$; further, the rate for White men was higher than the national percentage (50%), while the rate for AA men was lower (42.9%). AA men were less likely to report having had both a PSA and DRE in the past year (31.4% vs. 42.9%), as is recommended by several organizations. There was not a significant racial difference in the intention to get a DRE or PSA in the next year, although DRE intention was slightly higher for Whites. Notable, PSA intention (66.9%) was higher than DRE intention (60.6%). **Table 8** provides a summary of these figures.

Table 8. Screening Rates for Men in recommended age range for PC Screening

	USA Rates†	Total n=317	AA Men n=191	White Men n=126	Sig.
DRE ever		74.5%	67.5%	85.4%*	$p < .05$
PSA ever		66.8%	58.2%	79.8%*	$p < .05$
DRE within last 12 mos.	54%	49.2%	46.6%	53.2%	NS
PSA within last 12 mos.	50%	48.3%	42.9%	56.3%*	$p < .05$
PSA & DRE in last 12 mos.		36.0%	31.4%	42.9%*	$p < .05$
PSA or DRE in last 12 mos.		61.5%	58.1%	66.7%	NS
Intention to get DRE in 12 mos.		60.6%	57.1%	65.9%	NS
Intention to get PSA in 12 mos.		66.9%	64.9%	69.8%	NS

† Source: 2006 Behavioral Risk Factor Surveillance System (BRFSS), reported in Cokkinides et al, 2007

Figure 1. Racial Comparison of PC Screening Rates in Nashville, TN with USA Rate

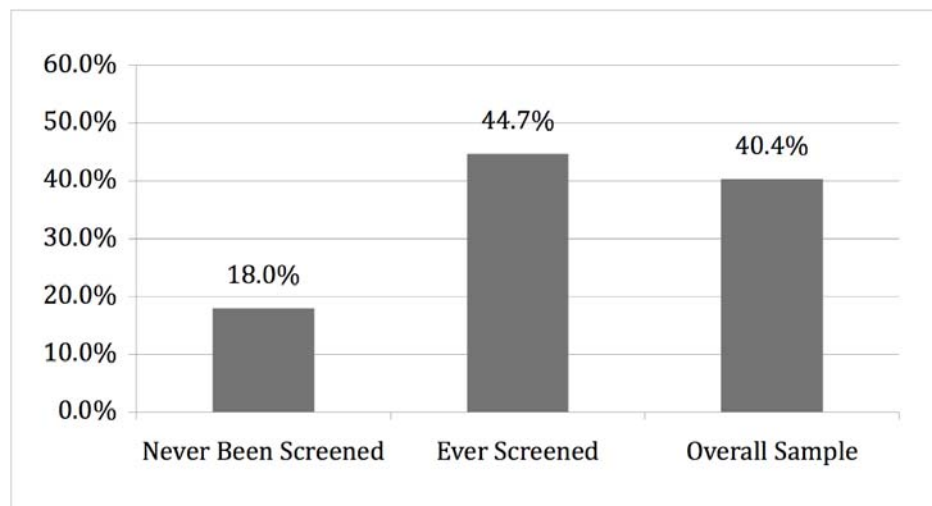


(b) Informed Decision Making

In this study, the question of informed decision-making (IDM) was addressed by asking respondents to report whether or not they had discussed prostate cancer screening with their physician, and, if they had never been screened, they were asked if they would like to talk with the doctor about prostate cancer screening. If the respondent had discussed screening they were also asked to state what were the doctor's recommendations.

Overall, only 40.4% of men in the recommended age range for prostate cancer screening ages (40-70 for AA men and 50 – 70 for White men) stated that they had ever discussed prostate cancer screening with their physician (IDM). There was no racial difference in IDM (41.4% AA; 38.8% white). Notably less than half (44.7%) of the sample who had been screened indicated that they had discussed PC screening with their doctor prior to their screening. Among those persons who had never obtained prostate cancer screening, only 18% reported that they had ever discussed prostate cancer screening with their physician. (See **Figure 2** below.) Interestingly, among the men who were never screened, three-fourths of men (76.1%) indicated that they would like to discuss it with their physician, while the other 23.9% stated that they did not want to discuss screening with their physician (results not shown in figure).

Figure 2. Informed Decision Making: Talked to Doctor about PC Screening Options



(c) Prostate Cancer Knowledge

The prostate cancer knowledge scale ranged from 0 to 19. There was no significant difference in the total mean score for prostate cancer knowledge between AA men (Mean=12.75; SD = 2.7) and white men (Mean = 12.91; SD=2.9). However, there were significant racial differences in the specific dimensions of knowledge about prostate cancer and prostate cancer screening. AA men were more likely to know about prostate cancer incidence and mortality than white men. On the other hand, white men were more likely to know about biological and medical aspects, such as the function and location of the prostate gland, and symptoms and treatment of prostate cancer. The study also looked at men in the recommended screening age ranges by race (40-70 years for AA men, 50-70 years for white men). The results were virtually the same, except white men ages 50-70 (in the recommended screening age range) were more likely to know that colonoscopy was not a method for prostate cancer screening and that radiation therapy was an option for prostate cancer treatment. **Table 9** shows the differences in number of respondents obtaining correct answers on the questions where there were significant differences.

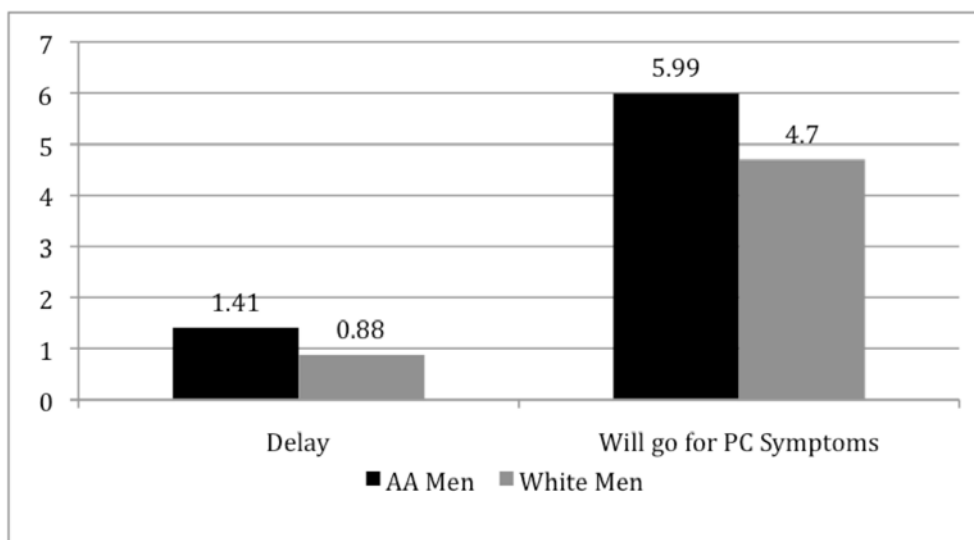
Table 9. Differences in correct responses to knowledge questions

	Total Sample		Participants in recommended age range for screening	
	AA n=194	White n=198	AA n=191	White n=126
	Percentage with Correct Answers			
Prostate gland is located in the rectum	25.3%	41.4%*	25.1%	43.7%*
Both men and women have prostate glands	59.3%	70.2%*	59.2%	70.6%*
AA men less likely to develop PC	79.4%	65.7%*	79.6%	65.9%*
PC is the most common type of cancer in men	85.1%	76.3%*	85.3%	77.8% NS
Colonoscopy is one way to screen for PC	34.0%	41.4% NS	34.0%	50.0%*
Biopsy is the only way to confirm PC diagnosis	52.6%	64.6%*	53.4%	69.0%*
Early stages of PC usually cause no pain	64.4%	76.3%*	64.4%	80.2%*
Radiation therapy is not an option for PC treatment	59.3%	65.2% NS	59.7%	70.6%*
PC is the second leading cause of cancer death in men	81.4%	66.2%*	82.2%	63.5%*
Once diagnosed, AA men more likely to die from PC	70.1%	41.4%*	70.7%	46.8%*
Correctly identified two ways PC screening is done	27.6%	42.1%*	27.0%	47.2%*

* Significant difference at $p < .05$

(d) Are there racial differences in health care seeking behaviors?

Figure 3 shows differences in health seeking behavior between AA and white men. Independent samples t-test showed that there are racial differences in health seeking behaviors among Nashville men. AA men had a higher mean score for general delaying of needed health care (1.4) when compared to white men (0.88) $p < .05$. However, AA men indicated that they were more likely (Mean = 5.99; SD = 2.56) than white men (Mean = 4.70; SD = 1.96) to seek medical attention for possible symptoms of prostate cancer (back pain, problems urinating or problems getting or keeping an erection).

Figure 3: Racial differences in health seeking behavior

Research Question #2

Are there racial differences in (a) the reasons for choosing to get screened, (b) reasons for not getting screened, or (c) reasons for considering screening?

(a) Reasons for choosing to get screened

Table 10 shows the reasons for obtaining screening. While AA and white men indicated the same top 6 reasons for obtaining screening, there were significant differences in some areas regarding their reasons for obtaining screening. Significantly more AA men (67.8%) than white men (53.5%) indicated that they obtained screening because of their desire to know if they had PC. Doctor recommendation for screening was significantly higher for white men (88.7%) than that for AA men (72.5%). In terms of the possible effects that PC can have on sexual and urinary health, significantly more AA men cited concerns about effects as their reason for getting screened than white men. Additionally, AA men (20.1%) were more likely to indicate that encouragement from faith community was a reason for screening than white men (7.8%).

Table 10. Differences in reasons for choosing to get screened

	Total Sample	
	African American n=149	White n=116
You wanted to know if you have PC	67.8%	53.5%*
You didn't want to die from PC	58.4%	50.9%
You were worried that PC could cause problems with your sex life	28.2%	18.1% ⁺
You were worried that PC could cause you problems with urinating	42.3%	30.4%*
You thought that you might live longer if PC was detected early	73.2%	69.0%
Getting PC screening was part of taking care of your health	84.6%	83.6%
Taking care of your health was part of your spiritual beliefs	57.1%	50.9%
Your doctor recommended that you screened for PC	72.5%	88.7%*
Your family encouraged you to get screened	29.5%	25.0%
Members of your faith community encouraged you to get screened	20.1%	7.8%*
You felt it was common for men your age to get screened	73.2%	74.1%
You were concerned about it because you are getting older	65.1%	63.8%
A family member had PC	17.6%	18.3%
A family member had another type of cancer	31.8%	23.5%
Because you are African American	62.1%	NA

* Significant difference at $p < .05$

(b) Reasons for NOT Getting Screened

While 38.5% of the sample did not have any prostate cancer screening within the past year, only 13.3% had never had any type of prostate cancer screening. That is, they never had a PSA or a DRE. Among these men, who had never been screened for PC, the top six reasons for not having PC screening indicated more fatalistic beliefs as well as a lack of perception of need or benefit of screening. However, AA men were more likely to report that getting screened does not matter if it is your time die. The differences in reasons for not obtaining PC screening are listed in **Table 11** below.

Table 11. Differences in reasons for not getting screened

	Total Sample	
	African American n=42	White n=10
You don't want to know if you have PC	28.6%	30.0%
You are afraid of dying from PC	19.1%	10.0%
It doesn't make a difference if PC is found early	45.2%*	0.0%*
Getting screened doesn't matter if it's your time to die	23.8%	30.0%
You trust God to take care of you so you don't need to be screened	40.5%	30.0%
Your doctor recommended that you should not get screened	9.5%	0.0%
Your family discouraged you from getting screened	23.4%	0.0%
Members of faith community discouraged you from getting screened	0.0%	0.0%
You think most men your age don't get screened for PC	38.1%	10.0%
You don't want to have more health problems to deal with	11.9%	20.0%
You don't understand how the screening test work	29.3%	30.0%
You are not sure if the PSA test is accurate	14.3%	0.0%
You don't like needles	21.4%	10.0%
You don't have health insurance to pay for the screening	28.6%	10.0%
You don't have a regular doctor to go to	28.6%	30.0%
You don't have time to go get screened	19.1%	20.0%
You don't think that you will get PC	17.1%	20.0%
You have heard of men who had bad experiences getting screened	16.7%	10.0%
You didn't know anything about screening before this interview	28.6%	0.0%

* Significant difference at $p < .05$

(C) Reasons For Considering Screening

There are no racial differences in the reasons for considering prostate cancer screening among men who had never obtained a PSA test or a DRE. See **Table 12** below.

Table 12. Differences in reasons for considering screening

	Total Sample	
	African American n=41	White n=10
You would want to know if you have PC	87.8%	66.7%
You don't want to die from PC	78.1%	80.0%
You worry that PC could cause problems with your sex life	48.8%	30.0%
You worry that PC could cause you problems with urinating	61.0%	60.0%
You might live longer if PC was detected early	92.7%	80.0%
Getting PC screening is part of taking care of your health	87.8%	70.0%
Taking care of your health is part of your spiritual beliefs	63.4%	60.0%
Your doctor recommended that you get screened for PC	65.9%	60.0%
Your family encouraged you to get screened	56.1%	50.0%
Members of your faith community encouraged you to get screened	48.8%	30.0%
You felt it was common for men your age to get screened	77.5%	70.0%
You were concerned about it because you are getting older	82.9%	60.0%
A family member had PC	40.0%	60.0%
A family member has another type of cancer	39.0%	40.0%
You are African American	63.2%	NA

* Significant difference at $p < .05$

Research Question 3

Are their racial differences in the predictors of informed decision-making or prostate cancer screening?

Table 13 presents bivariate analyses of whether various independent variables have a significant association with informed decision-making (IDM), which was measured as having talked to a doctor about PC screening options, for men in recommended screening ages (AA 40-70, White 50-70). For both white men and AA men, almost all of the men who said their doctor recommended screening also reported having talked to their doctor about screening options (IDM); this is not surprising since the doctor has to talk to the patient to make a recommendation. However, a few independent variables were significant for only one of the racial groups. For white men, there was a significant positive association between IDM and having a medical home and quality of physician interaction. For AA men, there was a significant positive association between IDM and the number of physician visits.

Table 13. Bivariate Associations of Independent Variables with Informed Decision-Making (IDM) by Race

	African American [†]		White [†]	
	No IDM n=112	IDM n=77	No IDM n=131	IDM n=60
	Mean or Percentage			
Education				
College degree or higher	22.0%	23.4%	43.8%	42.6%
Health literacy (REALM)	8.62	11.13	3.71	4.47
Prostate cancer knowledge				
Know two PC screening methods	28.7%	23.7%	47.2%	47.8%
Total knowledge score	13.05	12.49	13.38	13.51
History of prostate health problems	15.0%	10.4%	21.6%	21.3%
Healthcare access				
Have medical insurance	75.2%	85.7% ⁺	83.6%	91.5%
Have medical home (usual place of care)	89.0%	94.8%	87.8%	97.9%*
# Doctor visits in the past 12 months	2.88	6.30*	3.12	7.72
Ever been seen by urologist	35.5%	49.3% ⁺	53.4%	66.0%
Quality of interaction with doctor	21.56	21.64	21.47	22.26*
Delay of care	50.5%	48.1%	44.6%	34.0%
Doctor recommended screening	1.8%	89.6%*	2.7%	93.6%*
Perceptions of screening methods				
Perception of pain from PSA	1.19	1.30 ⁺	1.24	1.17
Perception of pain from DRE	1.74	1.75	1.61	1.47
Think DRE is embarrassing	37.7%	33.3%	31.5%	26.1%
Think DRE violates manhood	35.5%	44.1%	11.0%	14.9%
Think DRE makes feel like less of a man	15.2%	14.3%	5.6%	10.6%
Think DRE could stimulate homosexual tendencies	6.5%	11.8%	6.9%	2.1%
Self-efficacy	22.46	23.21	22.74	24.09 ⁺
Social Support				
Married or living with partner	58.7%	58.4%	70.3%	78.7%
Perceived Social Support Scale	23.54	23.97	24.22	25.45
Religiosity: Importance of religion	2.61	2.74	2.27	2.49
Perceived racial discrimination in healthcare	11.3%	14.3%	2.7%	0.0%

* Significant association with IDM at $p < 0.05$; [†]Marginal association with IDM at $p < 0.10$

Table 14 presents multivariate logistic regression analyses of the association of various independent variables on the odds of IDM. The model includes the three variables that were significant in the bivariate analysis, plus age as an additional control variable. Multivariate analysis allows us to assess the independent effect of each variable while controlling for the other variables in the model. As seen in the bivariate analyses, after controlling for other factors, the number of visits to the doctor was positively associated with IDM for AA men, and well as for the overall sample. For every additional doctor visit, AA men were 10% more likely to talk to their doctor about prostate cancer screening. For White men, the quality of physician interaction was marginally associated with IDM.

Table 14. Multivariate Logistic Regression of Independent Variables on IDM by Race

Variable	African American		White		Total	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Age	-.00	1.00	.03	1.03	.00	1.00
Have medical home	.41	1.51	1.47	4.33	.73	2.07
# Doctor visits in past 12 months	.10	1.10*	.02	1.02	.08	1.08*
Quality of interaction with doctor	.01	1.01	.21	1.24 ⁺	.05	1.05
Constant	-1.10	0.33	-8.22	.000	-2.54	0.08

* Significant effect at $p < 0.05$

Table 15 presents bivariate analyses of whether various independent variables have a significant association with screening (either PSA or DRE in past 12 months). For both white men and AA men, screening was positively associated with total knowledge score, having a medical home, having been seen by a urologist, and being married or cohabiting. However, there were many independent variables that were significant for only one of the racial groups. For white men, there was a significant positive association between screening and medical insurance, quality of physician interaction, and perceived social support. For AA men, there was a significant positive association between screening and college education, a history of prostate health problems, the number of doctor visits in the past year, a doctor recommendation for screening.

Table 15. Bivariate Associations of Independent Variables with Screening (PSA or DRE) by Race

	African American [†]		White [†]	
	Not screened n=80	Screened n=111	Not screened n=42	Screened n=83
	Mean or Percentage			
Education				
College degree or higher	13.8%	28.8%*	33.3%	50.6% ⁺
Health literacy (REALM)	10.09	9.50	4.61	3.60
Prostate cancer knowledge				
Know two PC screening methods	22.8%	30.0%	42.5%	49.4%
Total knowledge score	12.15	13.22*	12.67	13.76*
History of prostate health problems	6.3%	17.3%*	11.9%	26.2% ⁺
Healthcare access				
Have medical insurance	75.0%	83.8%	76.2%	92.8%*
Have medical home (usual place of care)	83.8%	96.4%*	78.6%	98.8%*
# Doctor visits in the past 12 months	2.97	5.17*	7.33	4.24
Ever been seen by urologist	23.7%	53.2%*	42.9%	67.5%*
Quality of interaction with doctor	21.51	21.54	20.98	22.17*
Delay of care	50.6%	48.2%	52.4%	34.5% ⁺
Doctor recommended screening	26.3%	46.0%*	31.0%	45.2%
Perceptions of screening methods				
Perception of pain from PSA	1.30	1.19 ⁺	1.21	1.21
Perception of pain from DRE	1.76	1.73	1.62	1.52
Think DRE is embarrassing	39.7%	33.3%	26.2%	29.3%
Think DRE violates manhood	42.1%	36.9%	11.9%	12.1%
Think DRE makes feel like less of a man	17.1%	14.5%	12.2%	6.0%
Think DRE could stimulate homosexual tendencies	6.4%	10.9%	7.3%	3.6%
Self-efficacy	22.25	23.14	23.83	23.43
Social Support				
Married or living with partner	50.0%	64.9%*	50.0%	85.7%*
Perceived Social Support Scale	23.46	23.89	23.10	25.52*
Religiosity: Importance of religion	2.56	2.72	2.19	2.46
Perceived racial discrimination in healthcare	12.7%	11.9%	2.4%	1.2%

[†] Men in recommended age ranges for screening (AA men: 40-70 years; White men: 50-70 years)

* Significant association with screening at p<0.05; ⁺Marginal association with screening at p<0.10

Table 16 presents multivariate logistic regression analyses of the association of various independent variables (the ones that were significant in the bivariate analysis, plus age) on the odds of screening (either PSA or DRE in past 12 months). As seen in the bivariate analyses, after controlling for other factors, having a medical home was positively associated with screening for both AA and white men (adjusted odds ratio=6.98), but the effect was stronger for White men. Among White men, those with a medical home were over 12 times more likely to get screened than those without a medical home; while among AA men those with a medical home were over 5 times more likely to get screened than those without a medical home. Screening was also positively associated with age (5% higher odds for each year older), having been seen by a urologist (2 times more likely to be screened), a doctor recommendation for screening (80% more likely to be screened), and being married or living with a partner (2 times more likely to be screened). However, when the sample is split by race, age, previous visit with a urologist, and doctor recommendation are only significant for AA men; at the same time, being married or living with a partner is only significant for White men.

Table 16. Multivariate Logistic Regression of Independent Variables on PC Screening by Race

Variable	African American		White		Total	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Age	.07	1.07*	.05	1.06	.05	1.05*
College degree or higher	.85	2.35 ⁺	.17	1.19	.40	1.49
Total knowledge	.09	1.09	.03	1.03	.08	1.08
History of prostate health problems	.22	1.25	.76	2.14	.53	1.71
Have medical insurance	-.50	.61	.09	1.10	-.31	.73
Have medical home	1.67	5.30*	2.54	12.72*	1.94	6.98*
# Doctor visits in past 12 months	.04	1.04	-.02	.99	-.01	.99
Ever been seen by urologist	.85	2.34*	.43	1.54	.71	2.03*
Quality of interaction with doctor	-.04	.96	.27	1.31 ⁺	.01	1.01
Doctor recommended screening	.71	2.04 ⁺	.12	1.13	.61	1.84*
Married or living with partner	.45	1.57	1.30	3.68*	.71	2.03*
Constant	-5.60	.00	-12.41	.00	-5.96	.00

* Significant effect at $p < 0.05$, ⁺Marginal effect at $p < 0.10$

Research Question 4

(a) Are there racial differences in sources of health information?

Cross tabulations and difference in proportions tests (z-test) were used to examine this research question. The doctor was the main source of health information for men. There were a few racial differences in sources of health information. However, significantly more AA men (76.3%) than white men (57.6%) indicated that the television was a main source of health information. On the other hand, white men (41.9%) were more likely to report that they used the Internet to obtain health information compared to 20.6% of AA men. White men were also likely to indicate that they used other sources for their health information. See **Table 16**.

Table 17. Racial Comparisons in Sources of Health Information

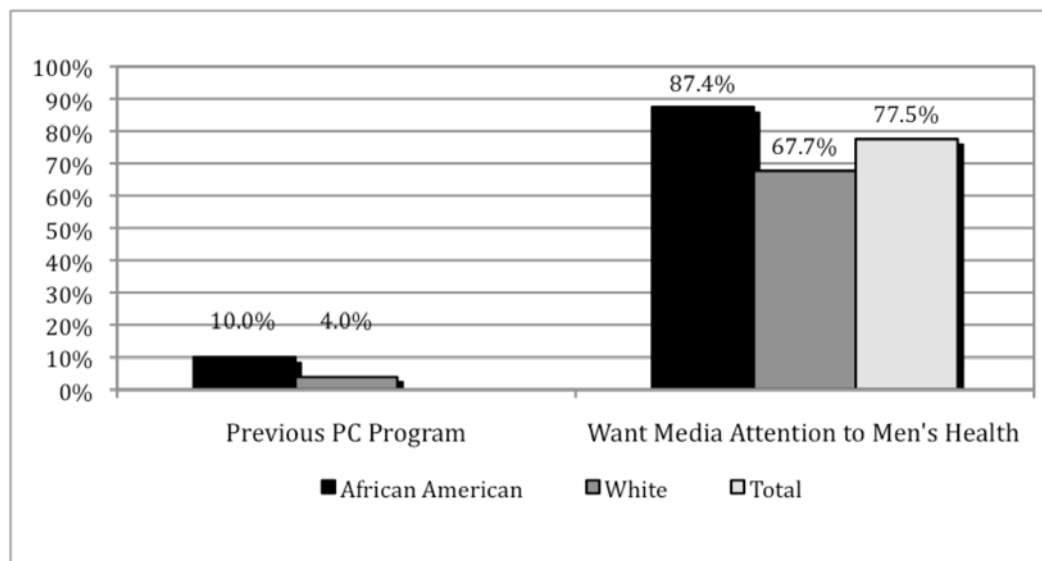
Sources of Health Information	African American n=194	White n=198	Total N=392
Television	76.3%	57.6%*	66.8%
Radio	22.7%	17.7%	20.2%
Newspaper	29.4%	30.3%	29.8%
Magazine	36.1%	32.8%	34.4%
Doctor	76.3%	76.8%	75.5%
Family members	32.5%	38.9%	35.7%
Friends	29.4%	29.3%	29.3%
Internet	20.6%	41.9%*	31.4%
Brochures and leaflets	21.1%	25.3%	23.2%
Church or religious organization	9.8%	3.5%	6.6%
Meetings	6.2%	4.0%	5.1%
Other sources	1.5%	5.6%*	3.6%

* Significant difference at $p < .05$

(b) Are there racial differences in previous attendance to prostate cancer education program?

Ten percent (10%) of AA men surveyed reported that they had attended a prostate cancer education program compared to only 4% of white men surveyed (**Figure 4**). This difference was significant at $p < .05$. Furthermore, more than 50% these AA men reported that they attended the prostate education program at their church or religious organization.

Figure 4. Attendance to Prior PC Education Program and Interest in Media Attention to Men's Health Issues



(c) Are there racial differences in desire to see more attention to men's health issues in the news and media?

There was a significant racial difference in whether or not men wanted to see more attention paid to men's health issues in the news and media. Significantly more AA men (87.4%) wanted more attention paid to men's health issues in the media when compared to white men (67.7%). This outcome is not surprising since more AA men reported that they obtained their health information from the television and radio than white men (**Figure 4, Table 15**).

Table 18. Desire for More Attention to Men's Health Issues in News & Media

	African American n = 191	White n = 195	Total N=386
Yes	87.4%	67.7%	77.5%
No	5.2%	19.0%	12.2%
No preference	7.3%	13.3%	10.4%

Significant association at $p < .05$

DISCUSSION

According to our survey of men in Nashville, Tennessee, self-reported PC screening rates were slightly below national averages based on the BRFSS survey. White men in the recommended age range were more likely than AA men to have ever had a DRE or PSA, and to report having a PSA in the past 12 months, but there was no racial difference in DRE screening in the past year. Almost two-thirds of men had a DRE and/or PSA in the past year, but only about one-third had both forms of screening in the past year. Informed decision-making (IDM) was lower than actual screening rates. Only 2 out of 5 men have engaged in IDM by talking with their doctors about PC and screening options, with no difference by race. The low prevalence of IDM is especially manifested in the fact that less than half of men who reported being screened said that they talked about screening options with their doctor. Nevertheless, three-fourths of men who had never been screened said that they would like to discuss it with their physician. Therefore, there is interest in IDM among men.

There was no significant difference in overall prostate cancer knowledge between AA men and White men. However, there were significant racial differences in the specific dimensions of knowledge about prostate cancer and prostate cancer screening. AA men were more likely to know about prostate cancer incidence and mortality than white men. On the other hand, white men were more likely to know about biological and medical aspects, such as the function and location of the prostate gland, symptoms of PC, PC screening methods, and treatment of PC. White and AA men also had some differences in the reasons reported for getting screened, for not getting screened, and for considering getting screened.

The number of visits to the doctor was positively associated with IDM, in particular for AA men. Having a medical home was positively associated with PC screening, but the effect was stronger for White men. For White men, being married or living with a partner was positively associated with PC screening. For AA men, age, previous visit with a urologist, and doctor recommendation were positively associated with PC screening.

The main sources of health information for men were the doctor and television. AA men were more likely to report television as a source of health information, and White men were more likely to report that they used the Internet to obtain health information. AA were more likely than White men to report that they had attended a prostate cancer education program, and over half of AA men attended the prostate education program at their church or religious organization. About three-fourths of men were interested in seeing more attention paid to men's health issues in the news and media, including an even higher percentage among AA men.

Debate continues about the efficacy of prostate cancer screening and early intervention. A few epidemiologic studies have investigated this issue (Labrie, Candas, Dupont, et. al, 1999; Labrie, Candas, Cusan, et. al, 2004; Sandblom, Varenhorst, Löfman, et. al, 2004; Aus, Bergdahl, Lodding et. al, 2006). To date there is inconclusive evidence from prospective cohort studies to determine whether screening or early treatment significantly decreases prostate cancer mortality or increases years of survival (Lim, Sherin, et. al, 2008). Some relevant national organizations and government agencies recommend annual screening with PSA and DRE for men in appropriate ages, but not all of them recommend widespread annual screening. However, there is agreement among these organizations that men should engage in informed decision-making by making regular (at least annual) visits to a doctor, preferably with the consistency of a medical home, and talking to their doctor about their risks for developing prostate cancer, their options for prostate cancer screening, and the doctor's recommendation, in order to make an individual decision about screening. Some research has focused on predictors and interventions to increase informed decision-making (Driscoll, Rupert, Golin et. al, 2008; Williams, Zincke, Turner, et. al, 2008).

Based on our focus group and survey results and other previous research, we recommend that efforts should focus on the development and testing of interventions (1) to increase Informed Decision-Making (IDM) among men in appropriate screening ages, and (2) to improve the quality of physician-patient communication regarding prostate health and prostate cancer. Interventions targeting men to

encourage doctor visits and IDM could use a faith-based approach and/or a community-based social marketing approach. Doctors could be targeted during training or as practicing physicians. Physicians could also use other means of communication (e.g., mail, email, phone calls) to initiate dialogue by reminding their male patients to come in for a checkup and talk to the doctor about prostate health issues. When appropriate, culturally-tailored interventions should target African American men due to their higher rates of prostate cancer incidence and mortality.

PHASE 5. Recommendations

We recommend that efforts should focus on the development and testing of interventions (1) to increase Informed Decision-Making (IDM) among men in appropriate screening ages, and (2) to improve the quality of physician-patient communication regarding prostate health and prostate cancer. When appropriate, culturally-tailored interventions should target African American men due to their higher rates of prostate cancer incidence and mortality.

First, some interventions to increase IDM should focus on encouraging men to have annual checkups with a regular doctor. Research should continue to develop and test the effectiveness of faith-based interventions to reach men and their social support networks, including wives, partners, children, pastors and other men. Faith-based interventions are culturally-appropriate for AA men, in particular. Another potentially effective intervention strategy that has not been examined sufficiently with research is to use a mass media public awareness campaign. A public health social marketing approach should be used to segment the population of men into targeted subgroups (based on cultural, behavioral, psychosocial characteristics) to develop tailored messages and communication channels for each subgroup. In particular, the Community-Based Prevention Marketing (CBPM) model developed by Bryant and colleagues (2007) combines social marketing with community-based participatory research, in which representatives of the target population are included as partners in the process of developing, implementing and evaluating social marketing interventions.

Our focus group and survey results could be used as formative research to inform the social marketing process of market segmentation, message framing, and selection of communication strategies. Our results suggest that an awareness campaign should use a positive tone, focusing on men's health and prostate health in general, mentioning prostate cancer in the context of other possible prostate health problems that are common among older men, and encouraging men to talk to their doctor about prostate health. Prostate health messages should mention that prostate health problems may cause problems with urination and sexual functioning, because these are important to men. Some messages can be culturally specific. For AA men, messages from male spokespersons could emphasize that the DRE does not stimulate homosexuality or make one less of a man. Television would be the best mass media communication channel for men, in particular AA men. The Internet is also a potentially effective communication channel, in particular for White men.

Secondly, further research should investigate interventions to improve the quality of physician-patient communication regarding prostate health and prostate cancer. This is crucial for informed decision-making to occur. Once men are motivated to visit their doctor for annual checkups, men need to ask their doctors about prostate health and prostate cancer issues, and their doctors need to be willing to talk about them with their patients, in an understandable way. Men must feel comfortable talking to their doctors about this topic, feel like their doctors are sincerely listening and concerned, and feel satisfied with the time doctors spend with them and their responses. Communication is a two-way process, so interventions could focus on men to be proactive in initiating dialogue with their doctors, and interventions could focus on doctors. Doctors could be targeting during training (medical school curriculum, residency training, etc.) or as practicing physicians. Physicians could also use other means of communication (e.g., mail, email, phone calls) to initiate dialogue by reminding their male patients to come in for a checkup and talk to the doctor about prostate health issues.

REPORTABLE OUTCOMES

Presentations:

- Pamela C. Hull, Ph.D.; Calvin Atchison, Ph.D.; Michelle C. Reece, M.S.; Jay Sexton, M.A., Baqar A. Husaini, Ph.D. “Barriers to Prostate Cancer Screening: Focus Group Findings,” Poster presentation at DOD IMPaCT meeting, September 2007
- Pamela C. Hull, Ph.D.; Calvin Atchison, Ph.D.; Michelle C. Reece, M.S.; Jay Sexton, M.A., Baqar A. Husaini, Ph.D. “Psychosocial Factors Influencing Doctor Visits and Prostate Cancer Screening among Men,” Poster presentation at American Public Health Association annual meeting, October 2008:
- Pamela C. Hull, Ph.D.; Michelle C. Reece, M.S.; Calvin Atchison, Ph.D.; Meegan Lambert, B.S., Baqar A. Husaini, Ph.D. “Race and Prostate Cancer Screening among Nashville Men,” Poster Presentation at American Association for Cancer Research (AACR) Cancer Health Disparities conference, February 2009
- Meegan Lambert, B.S.; Ayile’ Perry; Michelle Reece, M.S.; Pamela C. Hull, Ph.D. “Impact of Knowledge on Prostate Cancer Screening-Nashville Men’s Preventive Health Survey,” Student Oral Presentation at Tennessee State University Annual Research Symposium, March 2009
- Michelle Reece, M.S., “Strategies for recruiting African-Americans into biomedical research - Lessons Learned from the Nashville Men’s Preventive Health Survey,” Oral Presentation at Meharry Medical College Prostate Cancer Research Training Program (PCaRT), June 2009

Manuscripts in Progress:

- Pamela C. Hull, Calvin Atchison, Michelle C. Reece, Jay Sexton, Baqar A. Husaini. “Barriers to Prostate Cancer Screening: Focus Group Findings”
- Pamela C. Hull, Calvin Atchison, Michelle C. Reece, Meegan Lambert, Baqar A. Husaini. “Nashville Men’s Preventive Health Survey”

KEY RESEARCH ACCOMPLISHMENTS

Phase 1

- Formed Community Steering Committee (CSC)
- Collaborated with CSC to gain input on content of focus group discussions and recruitment strategies
- Developed focus group discussion guide, pre-questionnaire and focus group procedures
- Developed recruitment flyer and recruitment plan
- Obtained approval of focus group study protocol from local IRB and DOD
- Identified and reserved sites across Davidson County for focus group sessions
- Recruited 2 focus group facilitators
- Held orientation session with facilitators to review focus group procedures and discussion guide (including human subjects protection training)
- Purchased participant incentives (grocery gift cards).
- Implemented recruitment strategies and signed up potential participants
- Conducted ten 90 minute focus groups, enrolling 74 participants
- Tabulated demographic characteristics of participants
- Transcribed and analyzed focus group discussion recordings
- Submitted annual progress report

Phase 2

- Completed transcription of focus groups
- Completed qualitative analysis of focus groups
- Used focus group findings to develop new questionnaire items
- Collaborated with Community Steering Committee (CSC) to gain input on content of questionnaire and survey recruitment strategies
- Worked with expert consultants to refine questionnaire items and format
- Worked with expert consultant to develop sampling design for survey
- Developed interviewer flash cards, respondent booklet, recruitment flyer, informed consent form, field tracking forms, and databases.
- Prepared interviewer training materials
- Started recruiting, hiring and training field interviewers
- Prepared and submitted survey protocol for local IRB and DOD human subjects committee review.
- Re-submitted protocol with requested clarifications to both committees for final approval.
- Received approvals from local IRB and DOD human subjects committee.
- Submitted annual progress report

Phase 3

- Selected Census Blocks for sampling frame using Proportional Population to Size (PPS) cluster sampling method, based on data from the US Census Bureau
- Created tracking files for contacting potential research participant information
- Created secure databases for managing survey data and protecting human subjects
- Field Interviewers and Team leaders visited 8245 individual households to screen and enroll survey participants
- Overall approximately 20,000 contacts were made (door to door contacts and telephone follow-ups)
- Interviews were completed with 392 valid participants
- Household tracking forms and questionnaire data were edited and keyed into secure databases
- Statistical analyses were conducted
- Preliminary results were presented at professional meetings
- Manuscript preparation
- Submitted final report

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APPENDIX:
SURVEY QUESTIONNAIRE

Date: ____/____/____ Time Started ____ : ____
 Interviewer: _____ Time Completed ____ : ____

IDNO								
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I'm going to give you this answer booklet. For some of the questions, I will ask you to turn to a page that will show you the answer choices. For most questions you will choose only one answer, unless I ask you to choose more than one. We appreciate you answering the questions openly and honestly.

Please turn to PAGE 1 in your booklet. I am going to read five statements. Using the choices on Page 1, please tell me how much you agree or disagree with each statement. (LIFESAT1-5)

	Strongly Disagree	Disagree	Slightly Disagree	Neither Disagree/ Agree	Slightly Agree	Agree	Strongly Agree	DK	
1. In most cases my life is close to my ideal	0	1	2	3	4	5	6	8	
2. The conditions of my life are excellent	0	1	2	3	4	5	6	8	
3. I am satisfied with my life	0	1	2	3	4	5	6	8	
4. So far I have gotten the important things I want in life	0	1	2	3	4	5	6	8	
5. If I could live my life over, I would change almost nothing	0	1	2	3	4	5	6	8	

Thank you. You can put the booklet down. Now I have some questions about your health. SELF RATED HEALTH

1. In general would you say your health is...? (HLTH)	5 Excellent 4 Very Good	3 Good 2 Fair	1 Poor 8 DK	
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EXERCISE

1. Do you do any physical activities for at least 10 minutes at a time such as: brisk walking, bicycling, vacuuming, or doing anything else that causes increases in your breathing rate or heart rate? (EXER1)	1 Yes 0 No (Skip Q2 and Q3) 8 DK	
2. How many days per week are you physically active for at least 10 minutes? (EXER2)	_____ Days/Week	0 Do not exercise 888 DK
3. On the days when you are physically active, how much total time do you spend doing these activities? (EXER3)	_____ Min/Day	0 Do not exercise 888 DK

PERCEIVED STRESS

Please turn to PAGE 2 in the booklet. For the next ten questions I will ask you about your feelings and thoughts during the last month. For each one, please tell me how often you felt or thought this way. (PSS1 – PSS10)

In the last month, how often have you...	Never	Almost Never	Sometimes	Fairly Often	Very Often	DK	
1. been upset because of something that happened unexpectedly?	0	1	2	3	4	8	
2. felt that you were unable to control the important things in your life?	0	1	2	3	4	8	
3. felt nervous and "stressed"?	0	1	2	3	4	8	
4. felt confident about your ability to handle your personal problems?	0	1	2	3	4	8	
5. felt that things were going your way?	0	1	2	3	4	8	
6. found that you could not cope with all the things that you had to do?	0	1	2	3	4	8	
7. been able to control irritations in your life?	0	1	2	3	4	8	
8. felt that you were on top of things?	0	1	2	3	4	8	
9. been angered because of things that were outside of your control?	0	1	2	3	4	8	
10. felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4	8	

Thank you. You can put the booklet down. Now we're going to talk a little about prostate cancer. **PERCEPTION of RISK**

1. What do you think are your chances of getting prostate cancer at some time in your life? (RISK)	0 Not at all 1 Not very likely	2 Somewhat likely 3 Very likely 8 DK	
2. What do you think your chances are compared to other men? (RISK2)	0 Lower than most 1 Same as most	2 Higher than most 8 DK	
3. How worried are you about getting prostate cancer? (WORRY)	0 Not at all 1 A little	2 Somewhat 3 A lot 8 DK	

KNOWLEDGE

Now I am going to say some statements about prostate cancer. Some of them are correct and some of them are <u>not</u> correct. Please listen to each statement. If you think it is correct, say TRUE, and if you think it is not correct say FALSE. (KNOW1-18)	True	False	DK	
1. The prostate gland is located in the rectum.	1	0	8	
2. Both men and women have prostate glands.	1	0	8	
3. The prostate gland produces fluid that mixes with sperm to form semen.	1	0	8	
4. Prostate cancer only occurs in men over 65 years of age.	1	0	8	
5. African American men are less likely to develop this type of cancer.	1	0	8	
6. Prostate cancer is the most common type of cancer among men.	1	0	8	
7. Having a father or brother with prostate cancer more than doubles a man's risk of developing this disease.	1	0	8	
8. It is recommended that beginning at age 18, men should be examined yearly for prostate cancer.	1	0	8	
9. A colonoscopy can be used to check for possible prostate cancer.	1	0	8	
10. A digital rectal exam can be used to check for possible prostate cancer.	1	0	8	
11. A biopsy is the only way to confirm if you have prostate cancer.	1	0	8	
12. Early stages of prostate cancer usually cause no pain.	1	0	8	
13. The earlier prostate cancer is discovered, the better the chances are for effective treatment.	1	0	8	
14. Surgery can be done to remove the tumor that causes prostate cancer.	1	0	8	
15. Radiation therapy is not an option when treating prostate cancer.	1	0	8	
16. Treatment for prostate cancer may cause some side effects with urinating and erections.	1	0	8	
17. Prostate cancer is the second leading cause of cancer death in men.	1	0	8	
18. Once diagnosed, African Americans are more likely to die from prostate cancer than white Americans.	1	0	8	

Thank you. The next questions are about smoking. (SMOKE1-4)

SMOKING

1. Have you smoked at least 100 cigarettes in your entire life?	1 Yes	0 No <i>Skip to next page</i>	8 DK	
2. Do you NOW smoke?	1 Every day 2 Some days	3 Not at all <i>Skip to next page</i>	8 DK	
3. On average, how many cigarettes do you smoke per day?	_____		8 DK	
4. During the past 12 months, have you ever stopped smoking for more than one day because you were trying to quit smoking?	1 Yes	0 No	8 DK	

Thank you, next I have some questions about going to the doctor.

DOCTOR VISITS

1. Is there a place that you USUALLY go to when you are sick or need advice about your health? (MEDHOME1)	1 Yes, there is one place Go to Q2 2 Yes, there is MORE than one place Go to Q2 3 No, there is NO place Go to Q4 8 DK	
2. Please turn to Page 3 . What kind of place do you go to most often – a clinic, doctor’s office, emergency room, or some other place? (MEDHOME2)	1 Clinic or health center 2 Doctor’s office or HMO 3 Hospital emergency room 4 Hospital outpatient department	5 Some other place 6 Doesn’t go to one place most often 8 DK
3. Do you usually see the same doctor or different doctors when you go? (MEDHOME3)	1 Same doctor 2 Different doctors	8 DK
4. During the past 12 months, how many times have you gone to a hospital emergency room about your own health problem? (ERVISIT)	_____ # times	888 DK
5. During the past 12 months, how many times have you seen a doctor or other health care professional about your own health (not including in the hospital)? (SEEDOC1)	_____ # times	888 DK
6. About how long has it been since you last saw or talked to a doctor or other health care professional about your own health (in a doctor’s office or a hospital)? (SEEDOC2)	_____ # months ago	888 DK
7. Have you ever been seen by a urologist? (SEEDOC3)	1 Yes 0 No	8 DK
8. Did you have flu shot within the past 12 months? (FLU)	1 Yes 0 No	8 DK
9. Have you ever been tested for HIV? (HIV)	1 Yes 0 No	8 DK 9 Refused

PATIENT-PHYSICIAN RELATIONSHIP

Now think about the most recent time you visited a doctor. I am going to ask you some questions about this most recent visit to the doctor. (DOCTOR1-7)

1. Did the doctor spend as much time with you as you wanted, almost as much as you wanted, less than you wanted, or a lot less than you wanted?	1 As much time with you as you wanted 2 Almost as much as you wanted 3 Less than you wanted 4 A lot less than you wanted	
2. Did the doctor involve you in decisions about your care as much you wanted, almost as much as you wanted, less than you wanted, or a lot less than you wanted?	1 As much as you wanted 2 Almost as much as you wanted 3 Less than you wanted 4 A lot less than you wanted	
3. Did the doctor treat you with a great deal of respect and dignity, a fair amount, not very much, or none at all?	1 Great deal 3 Not very much 2 Fair amount 4 None at all	
4. Did the doctor listen to everything you had to say, to most, to some, or to only a little?	1 Everything 3 Some 2 Most 4 A little	
5. Did you understand everything the doctor said, most, some or only a little?	1 Everything 3 Some 2 Most 4 A little	
6. How often did the doctor use medical words that you did not understand?	1 Frequently 3 Seldom 2 Sometimes 4 Never	
7. How often did you have trouble understanding your doctor because he or she spoke too fast?	1 Frequently 3 Seldom 2 Sometimes 4 Never	

DELAYING CARE

People sometimes put off getting medical care for many reasons. Have you delayed getting care for any of the following reasons in the PAST 12 MONTHS? (DELAY1-11) Did you delay getting care because...?	Yes	No	DK	
1. You couldn't get through on the telephone	1	0	8	
2. You couldn't get an appointment soon enough	1	0	8	
3. Once you get there, you have to wait too long to see the doctor	1	0	8	
4. The clinic or doctor's office wasn't open when you could get there	1	0	8	
5. You didn't have transportation	1	0	8	
6. You didn't have health insurance	1	0	8	
7. You couldn't afford it	1	0	8	
8. You didn't want to find out that you had other health problems	1	0	8	
9. You might catch an illness you didn't have before	1	0	8	
10. You don't trust doctors	1	0	8	
11. You think some doctors request unnecessary tests just to make money	1	0	8	

Please turn to Page 4 . How likely are you to go to the doctor... (VISITS 1-9)	Not at all	Not very likely	Somewhat likely	Very Likely	DK	
1. If you have a fever	0	1	2	3	8	
2. If you have chest pain	0	1	2	3	8	
3. If you have back pain	0	1	2	3	8	
4. If you have trouble getting or keeping an erection	0	1	2	3	8	
5. If you have problems urinating	0	1	2	3	8	

MEDICAL HISTORY

Please tell me all of the health conditions that a doctor has diagnosed or treated you for in the past two years.

List here:				
If any of the following were not mentioned, ask: What about ...	Yes	No	DK	
Enlarged prostate (also called BPH or benign prostatic hyperplasia) (BPH)	1	0	8	
Infection in the prostate, or prostatitis (INFPROS)	1	0	8	
Depression (DEPRES)	1	0	8	
Any other mental health condition (MENTAL) What type? _____	1	0	8	
Have you ever had cancer? (CANANY) What type? _____	1	0	8	

FAMILY HISTORY

1. Have any of your relatives ever been diagnosed with cancer? (CANRELY)	1 Yes	0 No	8 DK	
	Skip to next page			

2. **IF YES:** Which relative(s) & what type of cancer did they have? (Use additional sheet if necessary.)

RELATIVE (CANRELa-d)	TYPE OF CANCER (CANTYPa-d)	Have any of your relatives died of cancer? (CANDa-d)			
		Yes	No	DK	
a.		1	0	8	
b.		1	0	8	
c.		1	0	8	
d.		1	0	8	

PROSTATE CANCER SCREENING

Please look at the choices on **PAGE 5**. Some men believe that a doctor can check for possible prostate cancer in many different ways. Please choose the **TWO** ways you believe that a doctor checks for possible prostate cancer. (HOWSCRN1, HOWSCRN2)

1. X-ray	3. Colonoscopy	5. Urine Test	7. Other _____	
2. Blood Test	4. Rectal Exam	6. Skin Test	8. DK	

*If the respondent chose #2 **AND** #4 say: Yes, you are correct.*

*If the respondent chose **EITHER** #2 **OR** #4 say: _____ is one of the ways it is usually done.*

*If the respondent chose **NEITHER** #2 **NOR** #4 say: Actually that is not how it is usually done.*

CONTINUE FOR ALL and give WHITE card to respondent to have for remainder of interview:

The two ways a doctor usually screens for prostate cancer are:

1. A blood test called the prostate specific antigen or PSA blood test.
2. A rectal exam where the doctor places a finger in the rectum (the rear end) and feels the prostate gland for any unusual bumps. This is called the digital rectal exam or DRE for short.

(SCREEN1-8)	Yes	No	Not Decided	
1. Do you plan to get a PSA blood test in the next 12 months?	1	0	2	
2. Do you plan to get a DRE exam in the next 12 months?	1	0	2	
	Yes	No	DK	
3. Have you ever had the PSA blood test? <i>If NO, skip to Q6</i>	1	0	8	
4. How many times have you had a PSA blood test?	_____ times		888	
5. When was your last PSA blood test? (# of months ago)	_____ months ago		888	
6. Have you ever had a digital rectal exam (or DRE, the finger test)? <i>If NO, skip Q7 and Q8</i>	1	0	8	
7. How many times have you had your DRE?	_____ times		888	
8. When was your last DRE? (# of months ago) 999 = Never	_____ months ago		888	

Has respondent ever had?	PSA	DRE	
			Mark answers here
	✓	✓	⇒ Continue to Page 6
	✓	×	⇒ Continue to Page 6
	×	✓	⇒ Continue to Page 6
	×	×	⇒ Skip to Page 8

This page is only for men who HAVE BEEN screened (either PSA or DRE).

REASONS FOR GETTING SCREENED

USE THE GREEN FLASH CARDS. Hold up one at a time, mark answers, and separate YES and NO responses into two piles.

Next I will read some reasons why some men get screened for prostate cancer (using either a PSA blood test or DRE). Please tell me which reasons caused you to get screened, by answering Yes or No for each one.

<i>You got screened for prostate cancer because... (SCRN1-16)</i>	YES	NO	Ranking of 5 most important (RANKYES)	
1. You wanted to know if you have prostate cancer	1	0		
2. You didn't want to die from prostate cancer.	1	0		
3. You were worried that prostate cancer could cause problems with your sex life.	1	0		
4. You were worried that prostate cancer could cause you problems with urinating.	1	0		
5. You thought that you might live longer if prostate cancer was detected early.	1	0		
6. Getting prostate cancer screening was part of taking care of your health.	1	0		
7. Taking care of your health was part of your spiritual beliefs.	1	0		
8. Your doctor recommended that you get screened for prostate cancer.	1	0		
9. Your family encouraged you to get screened.	1	0		
10. Members of your faith community encouraged you to get screened.	1	0		
11. You felt it was common for men your age get screened.	1	0		
12. You were concerned about it because you are getting older.	1	0		
13. A family member had prostate cancer.	1	0		
14. A family member had another type of cancer.	1	0		
15. <i>[If respondent is African-American]</i> Because you are African-American.	1	0		
16. Is there any other reason why you got screened?				

Give the respondent the cards with the reasons that he chose and say:

These are the reasons you said Yes to.

***If more than 5 cards:* Could you pick the 5 most important reasons why you got screened?**

ALL:* Can you please rank these reasons in order of which was the most important reason to the least important reason? **Mark the rankings above next to the reasons, up to 5 reasons.*

This page is only for men who HAVE BEEN screened (either PSA or DRE).

INFORMED DECISION-MAKING

1. Before you were screened for prostate cancer, did your doctor talk to you about your screening options? (INDM1)	1. Yes	0. No Skip Q2 and Q3	8. DK	
2. Who brought up the topic, you or the doctor? (INDM2)	1. You did	2. The doctor did	8. DK	
1. Please turn to PAGE 6 . What did the doctor recommend for you? (INDM3)	1. To get a PSA blood test 2. To get a DRE (rectal exam) 3. To get both PSA and DRE 4. Not to get either one 5. He did not make any recommendation 8. DK			

DRE EXAM POSITION

[If respondent had DRE before]:

1. Has a doctor ever performed a DRE when you were:				
a. Standing and leaning over a table or chair? (EXPOS1)	1. Yes	0. No	8. DK	
b. Lying down on your side? (EXPOS2)	1. Yes	0. No	8. DK	
<i>[If respondent answered YES to both 12a and 12b]</i> 2. Which position was more comfortable? (EXPOS3)	1. Standing and leaning over a table 2. Lying down on your side 3. Either one is the same 8. DK			

SKIP TO PAGE 10

This section is only for men who NEVER had PSA or DRE (NEITHER ONE)

REASONS FOR NOT GETTING SCREENED

USE THE BLUE FLASH CARDS. Hold up one at a time, mark answers, and separate YES and NO responses into two piles.

Next I will read some reasons why some men do NOT get screened for prostate cancer (using either a PSA blood test or DRE). Please tell me the reason(s) why you have NOT gotten screened, by answering Yes or No for each one.

<i>You didn't get screened because... (SCRNNO1-20)</i>	YES	NO	Ranking of 5 most important (RANKNO)	
1. You don't want to know if you have prostate cancer.	1	0		
2. You are afraid of dying from prostate cancer.	1	0		
3. It doesn't make a difference if prostate cancer is found early.	1	0		
4. Getting screened doesn't matter if it's your time to die.	1	0		
5. You trust God to take care of you so you don't need to be screened	1	0		
6. Your doctor recommended that you should <u>not</u> get screened	1	0		
7. Your family discouraged you from getting screened.	1	0		
8. Members of your faith community discouraged you from getting screened.	1	0		
9. You think most men your age don't get screened for prostate cancer.	1	0		
10. You don't want to have more health problems to deal with.	1	0		
11. You don't understand how the screening tests work.	1	0		
12. You are not sure if the PSA blood test is accurate.	1	0		
13. You don't like needles.	1	0		
14. You don't have health insurance to pay for the screening.	1	0		
15. You don't have a regular doctor to go to.	1	0		
16. You don't have time to go get screened.	1	0		
17. You don't think that you will get prostate cancer.	1	0		
18. You have heard of men who had bad experiences getting screened.	1	0		
19. You didn't know anything about screening before this interview.	1	0		
20. Is there any other reason why you have not gotten screened? _____	1	0		

Give the respondent the cards with the reasons that he chose and say:

These are the reasons you said Yes to.

If more than 5 cards: Could you pick the 5 most important reasons why you have not gotten screened?

ALL: Can you please rank these reasons in order of which was the most important reason to the least important reason? **Mark the rankings above next to the reasons, up to 5 reasons.**

This section is only for men who NEVER had PSA or DRE (NEITHER ONE).

REASONS FOR GETTING SCREENED

USE THE YELLOW FLASH CARDS. Hold up one at a time, mark answers, and separate YES and NO responses into two piles.

Now I will read some reasons why some men DO get screened for prostate cancer (using either a PSA blood test or DRE). Please tell me which reasons would cause you to consider getting screened, by answering Yes or No for each one.

<i>You would consider getting screened ... (SCRNMY1-16)</i>	YES	NO	Ranking of 5 most important (RANKMAY)
1. Because you would want to know if you have prostate cancer	1	0	
2. Because you don't want to die from prostate cancer.	1	0	
3. Because you worry that prostate cancer could cause problems with your sex life.	1	0	
4. Because you worry that prostate cancer could cause you problems with urinating.	1	0	
5. Because you might live longer if prostate cancer is detected early.	1	0	
6. Because getting screening is part of taking care of your health.	1	0	
7. Because taking care of your health is part of your spiritual beliefs.	1	0	
8. If your doctor recommended that you get screened for prostate cancer.	1	0	
9. If your family encouraged you to get screened.	1	0	
10. If members of your faith community encouraged you to get screened.	1	0	
11. Because you feel it is common for men your age to get screened.	1	0	
12. Because you are concerned about it because you are getting older.	1	0	
13. Because a family member had prostate cancer.	1	0	
14. Because a family member had another type of cancer.	1	0	
<i>[If respondent is African-American]:</i>	1	0	
15. Because you are African-American.			
16. Is there any other reason why you would consider getting screened?			

Give the respondent the cards with the reasons that he chose and say:
These are the reasons you said Yes to.
***If more than 5 cards:* Could you pick the 5 most important reasons why you would consider getting screened?**
***ALL:* Can you please rank these reasons in order of which was the most important reason to the least important reason? Mark the rankings above next to the reasons, up to 5 reasons.**

(INDCMK1-4)

INFORMED DECISION-MAKING

1. Have you ever talked with a doctor about getting screened for prostate cancer?	1. Yes	0. No <i>Skip to Q4</i>	8. DK
2. Who brought up the topic, you or the doctor?	1. You did	2. The doctor did	8. DK
3. Please turn to PAGE 6 . What did the doctor recommend for you? <i>Skip to Next Page</i>	1. To get a PSA blood test 2. To get a DRE (rectal exam) 3. To get both PSA and DRE	4. Not to get either one 5. He did not make any recommendation 8. DK	
4. Would you like to discuss prostate cancer screening with a doctor?	1. Yes	0. No	8. DK

ALL MEN CONTINUE THE REST OF QUESTIONNAIRE

Please turn to **PAGE 7** and look at the faces.

PERCEPTIONS OF SCREENING METHODS

1. When you think about getting the PSA blood test, which face best describes how you feel? (FACES1)	_____	
2. When you think about getting the digital rectal exam (DRE), which face best describes how you feel? (FACES2)	_____	

Now I have a few questions about the Digital Rectal Exam	Yes	No	DK	
1. Do you think that getting a DRE is embarrassing? (DREC1)	1	0 <i>Skip to Q3</i>	8	
2. <i>If the respondent says YES, say:</i> What makes it embarrassing? (DREC2a-f)				
a. Being undressed in front of the doctor	1	0	8	
b. Feeling self-conscious about your body in front of the doctor	1	0	8	
c. Feeling self-conscious about the doctor seeing your genital area	1	0	8	
d. Feeling vulnerable and exposed	1	0	8	
e. Being touched in the genital area	1	0	8	
f. Is there any other reason why you think it is embarrassing? _____				

3. Do you think getting a DRE is <u>less</u> embarrassing when you...? (DREC3)	1. Know the doctor well 2. Do not know the doctor well 3. There is no difference 8. DK	
--	---	--

4. Now I'm going to read a list of things that some men say about getting a DRE. Please tell me your opinion of whether each one is true or false. (DREC4a-g)	True	False	DK	
a. It feels uncomfortable	1	0	8	
b. It's bearable	1	0	8	
c. It violates your manhood	1	0	8	
d. It violates your privacy	1	0	8	
e. It makes you feel like less of a man	1	0	8	
f. It hurts	1	0	8	
g. It could stimulate homosexual (gay) tendencies	1	0	8	

DOCTOR PREFERENCES

Thank you. If you were to choose to have a DRE ...

(DOCPRF1-4)

1. Which would you prefer ...?	1. An older doctor 2. A younger doctor	3. It doesn't matter 8. DK	
2. Which would you prefer ...?	1. A Doctor you don't know 2. A Doctor you know well	3. It doesn't matter 8. DK	
3. Would you prefer the doctor to be ...?	1. Male 2. Female	3. It doesn't matter 8. DK	
4. Would you prefer the doctor to be of your same race?	1. Yes 2. No	3. It doesn't matter 8. DK	

Please turn to **PAGE 8** of your booklet. Where do you usually get information about health? You can pick up to 4 sources from the list. (HINFO1-4)

HEALTH INFORMATION

1. Television	5. Doctor	9. Brochures/Leaflets	12. Other:	
2. Radio	6. Family Members	10. Church / Religious organization		
3. Newspaper	7. Friends	11. Meetings	13. No Source	
4. Magazine	8. Internet		88 DK	

1. Would you like to see more attention to men's health issues in the news and media? (MEDIA)	1 Yes 0 No	2 No preference 8 DK	
2. Have you ever attended a prostate cancer education program? (PCEDU)	1 Yes 0 No [Skip Q3]	8 DK	
3. IF YES: Please turn to PAGE 9 . Where did you attend the prostate cancer education program? Choose all that apply. (PCEDW1-7)	1. Church / Religious organization 2. Community Center 3. Health Fair	4. Health Clinic 5. Men's group/Fraternity 6. Job	7. Other: 8. DK

SELF-EFFICACY

Please turn to PAGE 10 Now I am going to read some statements. Please say how TRUE the statement is for you. (GSE1-10)	Not at all true	Hardly true	Moderately true	Exactly true	DK	
1. I can always manage to solve difficult problems if I try hard enough.	0	1	2	3	8	
2. If someone opposes me, I can find the means and ways to get what I want.	0	1	2	3	8	
3. It is easy for me to stick to my aims and accomplish my goals.	0	1	2	3	8	
4. I am confident that I could deal efficiently with unexpected events.	0	1	2	3	8	
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	0	1	2	3	8	
6. I can solve most problems if I invest the necessary effort.	0	1	2	3	8	
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	0	1	2	3	8	
8. When I am confronted with a problem, I can usually find several solutions.	0	1	2	3	8	
9. If I am in trouble, I can usually think of a solution.	0	1	2	3	8	
10. I can usually handle whatever comes my way.	0	1	2	3	8	

MARLOWE CROWNE SCALE

Now I will read some statements about personal attitudes and traits. I am going to read each one, and you can tell me whether it is true or false for you. (MCSDS 1-10)	True	False	DK	
1. I never hesitate to go out of my way to help someone in trouble.	1	0	8	
2. I have never intensely disliked anyone.	1	0	8	
3. There have been times when I was quite jealous of the good fortune of others.	1	0	8	
4. I would never think of letting someone else be punished for my wrong doings.	1	0	8	
5. I sometimes feel resentful when I do not get my way.	1	0	8	
6. There have been times when I felt like rebelling against people in authority even though I knew they were right.	1	0	8	
7. I am always courteous, even to people who are disagreeable.	1	0	8	
8. When I don't know something, I don't mind admitting it.	1	0	8	
9. I can remember "playing sick" to get out of something.	1	0	8	
10. I am sometimes irritated by people who ask favors of me.	1	0	8	

Please turn to **Page 11**. There are three lists of words. Please say the words out loud, starting with List 1, followed by List 2 and then List 3. (REALM)

List 1	✓ If incorrect	List 2	✓ If incorrect	List 3	✓ If incorrect	
fat		fatigue		allergic		
flu		pelvic		menstrual		
pill		jaundice		testicle		
dose		infection		colitis		
eye		exercise		emergency		
stress		behavior		medication		
smear		prescription		occupation		
nerves		notify		sexually		
germs		gallbladder		alcoholism		
meals		calories		irritation		
disease		depression		constipation		
cancer		miscarriage		gonorrhea		
caffeine		pregnancy		inflammatory		
attack		arthritis		diabetes		
kidney		nutrition		hepatitis		
hormones		menopause		antibiotics		
herpes		appendix		diagnosis		
seizure		abnormal		potassium		
bowel		syphilis		anemia		
asthma		hemorrhoids		obesity		
rectal		nausea		osteoporosis		
incest		direct		impetigo		

Please note any reason that might be given for inability to read or complete lists:

PERCEIVED SOCIAL SUPPORT

Please turn to PAGE 12 . How much of the time ...? (ESS1-6)		None of the time	A little of the time	Some of the time	Most of the time	All of the time	DK	
1.	is there someone available to whom you can count on to listen to you when you need to talk?	1	2	3	4	5	8	
2.	is there someone available to you to give you good advice about a problem?	1	2	3	4	5	8	
3.	is there someone available to you who shows you love and affection?	1	2	3	4	5	8	
4.	is there someone available to help with daily chores?	1	2	3	4	5	8	
5.	can you count on anyone to provide you with emotional support (such as talking over problems or helping you make a difficult decision)?	1	2	3	4	5	8	
6.	do you have as much contact as you would like with someone you feel close to, someone in whom you can trust and confide in?	1	2	3	4	5	8	

MENTAL HEALTH

Still looking at PAGE 12 . How much of the time, during the last month, have you ...? (MHI1-5)	None of the time	A little of the time	Some of the time	Most of the time	All of the time	DK	
1. been a very nervous person?	1	2	3	4	5	8	
2. felt calm and peaceful?	1	2	3	4	5	8	
3. felt downhearted and blue?	1	2	3	4	5	8	
4. been a happy person?	1	2	3	4	5	8	
5. felt so down in the dumps that nothing could cheer you up?	1	2	3	4	5	8	

Now I have a few questions about religion.

RELIGION

1. What is your religious denomination? (RELIG1) _____					None 0	
2. Please go to PAGE 13 . How important is religion to you? (RELIG2)	Not at all important 0 <i>Skip to next section</i>	A little important 1	Moderately Important 2	Very Important 3	DK 8	
Please turn to PAGE 14		Never	Seldom	Sometimes	Frequently	DK
3. How often do you attend religious services? (RELIG3)	0	1	2	3	8	
4. How often do you attend/participate in religious events other than church, worship services or rituals? (RELIG4)	0	1	2	3	8	
5. How often does religion help you cope with personal problems? (RELIG5)	0	1	2	3	8	

Thank you. Now we have some other general questions.

DEMOGRAPHIC INFORMATION

1. How many adults and children live in your household? (DWEL1, DWEL2)	_____ Adults _____ Children (under 18)		
2. What was the month and year when you were born?	MONTH: ____ 88 DK		
	YEAR: 19 ____ 88 DK		
3. What country were you born in? (COUNTRY)	1 USA Other: _____		
4. What is your present marital status? (MARSTAT)	1. Married <i>Skip to Q8</i> 2. Separated 3. Divorced	4. Widowed 5. Never Married	
6. <i>[If NOT married]</i> Are you living with a partner or significant other? (MARSTAT2)	1. Yes 0. No		
Please turn to PAGE 15			
7. What is the highest grade you completed in school or the highest degree you have earned? (DEGREE)	1. No formal schooling 2. Less than High School: Grade _____ (DEGREE2) 3. High School 4. Some college/technical school	5. Associate's Degree 6. Bachelor's Degree 7. Master's Degree 8. Doctoral Degree (PhD, MD, JD, EdD, etc.) 88. DK	
Please turn to PAGE 16			
8. Do you have medical insurance? What type? (Pick all that apply) (INSURE1-7)	0. No insurance 1. Medicare Part A 2. Medicare Part B 3. TennCare 4. CoverTN	5. Private/Employer Insurance 6. Military (VA/CHAMPUS) 7. Other (Please Specify) _____ 8. DK	
9. During the past 12 months, for how many months did you have any type of medical insurance? (INSUREMO)	_____ # months 88 DK		
10. <i>[If no insurance]:</i> Are you enrolled in the Bridges to Care program? (BTC)	1 Yes 0 No 8 DK		

EMPLOYMENT & INCOME

1. When you think of your financial situation, how upset or stressed do you feel? (INCSTRS)	4. Very tense 3. Fairly worried	2. Mildly bothered 1. Not upset at all	
2. Are you currently working? (WORK1)	1 Yes <i>[Skip TO Q4.a.]</i> 0 No		
3. Are you... ? (WORK2) <i>[Go TO Q4.b.]</i>	1. Retired 2. Disabled	3. Currently looking for work 4. Not currently looking for work	
4. a. What kind of work do you do? b. What kind of work did you do at your last job? (WORK3)			

5. What is your household income? This means the total income of all the people in your household. (INCOME1) <i>If exact amount is not given:</i> If you look at Page 17 in your booklet, you can choose one of the categories in the list. Which one is approximately the total income earned by all the people in your household during this past year? (INCOME2)	\$ _____ Per: <input type="checkbox"/> Week <input type="checkbox"/> Month <input type="checkbox"/> Year	
1. Less than \$10,000 2. \$10,000 to \$14,999 3. \$15,000 to \$19,999 4. \$20,000 to \$24,999 5. \$25,000 to \$29,999 6. \$30,000 to \$34,999 7. \$35,000 to \$39,999	8. \$40,000 to \$44,999 9. \$45,000 to \$49,999 10. \$50,000 to \$54,999 11. \$55,000 to \$59,999 12. \$60,000 to \$64,999 13. \$65,000 to \$69,999 14. \$70,000 to \$74,999	15. \$75,000 to \$75,999 16. \$80,000 to \$84,999 17. \$85,000 to \$89,999 18. \$90,000 to \$94,999 19. \$95,000 to \$99,999 20. \$100,000 or higher 88 DK

	Yes	No	DK	
1. Have you ever been in the military? (MLTRY1)	1	0 <i>Skip Q2</i>	8	
<i>If yes and respondent had DRE ask:</i> (MLTRY2) 2. Did you have a DRE done while you were in the military?	1	0	8	
3. Have you ever spent time in prison? (PRSN1)	1	0 <i>Skip Q4</i>	8	
<i>If yes and respondent had DRE ask:</i> (PRSN2) 4. Did you have a DRE done while you were there?	1	0	8	

OK, I just have a few more questions. (DISCRM1-6)

1. Thinking about all the experiences you have had with health care visits in the last 2 years , have you ever felt that the doctor or medical staff you saw judged you unfairly or treated you with disrespect because of your race or ethnic background?	1 Yes 0 No 8 DK					
2. How many times in your life have you been discriminated against because of your race or ethnicity?	# of times 888 DK <i>[If 0, skip to Q6]</i>					
3. At what age did you first have an experience like that?	Actual Age _____				88 DK	
Please turn to PAGE 18 4. Overall, how much has discrimination interfered with you having a full and productive life?	A lot 1	Some 2	A little 3	Not at all 4	DK 8	
5. Overall, how much harder has your life been because of discrimination?	1	2	3	4	8	
6. How many times in your life have you discriminated against another because of their race or ethnicity?	# of times 888 DK					

1. On a different note, were you on any school sports team(s) while you were in high school or college? (SPORT1)	0 No <i>Go to Q3</i> 1 Yes		
2. Which sport(s) did you play? (SPORT3)	_____		
3. What is your favorite sport to watch on TV? (SPORT3)	0 None 8 DK		
4. Are you an active member of a: (MEMBER1-4)	Yes	No	DK
a. YMCA or Gym	1	0	8
b. Sports or recreation club	1	0	8
c. Men's group, fraternity or lodge	1	0	8
d. Other local community organization	1	0	8

Please turn to **Page 19** in the booklet.

Each picture shows the amount of fruits or vegetables that make up one serving. About how many servings of fruits or vegetables do you have in a typical day or week? (FRUITS)	1 ____ Servings per day	4 ____ Servings per year	
	2 ____ Servings per week	5 5 5 Never	
	3 ____ Servings per month	8 8 8 DK / Not sure	

OK, now we'll just record your height, weight and waist and we'll be done.

BODY MEASUREMENTS

1. a. Could you stand up please and we'll measure your height? (HT)	_____ in.	99 Refuse	
b. (<i>If refuse</i>): Do you remember what your height is? (HT2)	_____ in.	88 DK	
2. a. If you could stand on the scale please, I'll record your weight. (WT)	_____ lbs.	99 Refuse	
b. (<i>If refuse</i>): Do you remember what your weight is? (WT2)	_____ lbs.	88 DK	
3. a. Ok, now I'm going to give you this tape measure. Could you please use it to measure your waist around where your belly button is? Can you tell me how many inches it is? (WST)	_____ in.	999 Refuse	
b. (<i>If refuse</i>): Do you remember what your waist measures? (WST2)	_____ in.	88 DK	
4. Are there any other questions that you think we should have asked to understand men's health issues?			

OK. That brings us to the end of the survey. We thank you very much for taking your time to contribute to the survey. Your participation will help improve health programs for men. Please let me give you your gift card now.

[Give card and obtain signature]

Are there any questions you have for me before I leave?

[Write questions in space below. Provide answer if you know it. If not, say that you are not sure about the answer to that question, but that Dr. Hull would be happy to answer any questions he has if he would like to call her at the number on the information form. (Show number on consent form.)]

THANK YOU!

INTERVIEWER QUESTIONS

Interviewer: After completing the interview and leaving the respondent, fill out the following questions immediately. (INTRV1-13)

1	Where was the interview conducted?	1 Inside respondent's house 2 Immediately outside respondent's house 3 At another location: _____		
2	How candid was the respondent?	1 Very candid 2 Moderately candid	3 Somewhat candid 4 Not candid	
3	Did respondent appear to have difficulty reading?	0 No 1 Yes		
4	Did respondent appear to have difficulty understanding the questions?	0 No 1 Yes		
5	Did the respondent ever seem bored or impatient during the interview?	0 No 1 Yes		
6	Did the respondent's boredom or impatience negatively affect the quality of the interview?	0 No 1 Yes		
7	Did the respondent ever appear embarrassed about answering questions during the interview?	0 No 1 Yes		
8	What topics did the respondent appear embarrassed about?	_____ _____ _____		
9	Did the respondent appear to be drunk or under the influence of a drug?	0 No 1 Yes		
10	Was a third person present during any portion of the interview—not just walking through the area where the interview was being administered, but listening to or taking part in the interview process?	0 No 1 Yes		
11	If YES, who was present? Mark all that apply: (INTRV11a-e)	<input type="checkbox"/> a. Wife <input type="checkbox"/> b. Partner/Significant Other <input type="checkbox"/> c. Child(ren) <input type="checkbox"/> d. Other Adult Males <input type="checkbox"/> e. Other Adult Females		
12	Number of interruptions during the interview	#_____ (0 = None)		
13	Was there any evidence of smoking in the household—for example, ashtrays, people smoking, or cigarettes?	0 No 1 Yes		